CLINTON POWER STATION

Job Performance Measure

Print Reading

JPM Number: 0.13LLSN02

Revision Number: 00

Date: 3/12/07

Developed By:	**Tom Pickley**	**3/12/07**
	Instructor	**Date**
Reviewed By:	**Stacey Hagan**	**6/15/07**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

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

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

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and

b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

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

Revision Record (Summary)

Revision	Date	Description
0	3/12/07	Revision 0

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

(This page is applicable only to JPMs performed in the Simulator.)

1.   Reset the simulator to any IC

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

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

3.   This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

> I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.
>
> No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

- 5012-3B AUTOMATIC TRIP 480V BUS FEEDER BREAKER is determined as the annunciator that should have alarmed.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- Access to E02 prints.

PROCEDURAL/REFERENCES:

- E02-0AP99 Sheet 10, Revision D

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

- All pre-job briefings are completed.

Clinton Power Station
Job Performance Measure (JPM)

-

INITIAL CONDITIONS:

You are the B RO. An EO reports that the breaker for the Containment Polar Crane 1HC01G has tripped. The Main Control Room has not received an annunciator. The evaluator will act as all other crew members.

INITIATING CUE:

Determine which annunciator should have alarmed. Prove your results using the plant prints.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

---

*1   Locates 1HC01G on E02-1HC99 Sh 01

Standard:	Determines that 1HC01G is on E02-1HC99 Sh 01 and locates the drawing.
Cue:	
Comments	The drawing number can be found using PASSPORT, but any method used is acceptable

SAT ☐   UNSAT ☐   Comment Number _____

---

*2   Locates the BKR. ALM. SW. CONTACTS "r" connecting to E02-1AP99 Sh 041

Standard:	Determines the alarm contact connects to E02-1AP99 Sh 041
Cue:	
Comments	See attached portion of E02-1AP99 Sh041 @ E4

SAT ☐   UNSAT ☐   Comment Number _____

---

*3 **E02-1AP99 Sh. 41 is referenced to find the annunciator that should have alarmed.**

Standard: Student uses E02-1AP99 Sh. 41 to locate the alarm contacts "r" for feeding annunciator 5C on Div 1 P877.

Cue:

Comments See attached portion of E021AP99 Sh. 41

SAT ☐   UNSAT ☐   Comment Number _____

TERMINATING CUES:

The JPM may be terminated when the annunciator that should have alarmed has been identified on E021AP99 Sh 41

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO   ☐ RO   ☐ SRO   ☐ STA   ☐ SRO Cert

JPM Title: Print Reading

JPM Number: 0.13LLSN01   Revision Number: 0

Task Number and Title: (0.13L) Read Mechanical and Electrical Prints

K/A System	K/A Number	Importance (RO/SRO)	
262001	2.1.24	2.8	3.1

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator   ☐ Plant   ☐ Control Room

Testing Method: ☐ Simulate   **Faulted:**   ☐ Yes   ☒ No
                  ☐ Perform   **Alternate Path:**   ☐ Yes   ☒ No

Time Critical: ☐ Yes   ☒ No

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

References: E02-1HC99 Sheet 01 Revision J

                  E02-1AP99 Sheet 41, Revision M

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

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

Comments: _____

_____

_____

_____

_____

Evaluator's Name: _____   (Print)

Evaluator's Signature: _____   Date: _____

Initial Conditions

You are the B RO. An EO reports that the breaker for the Containment Polar Crane 1HC01G has tripped. The Main Control Room has not received an annunciator. The evaluator will act as all other crew members.

Initiating Cue

CAUTION
- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

Determine which annunciator should have alarmed. Prove your results using the plant prints.

P715 P740 P719 P703 P701 P730 P731

P612 | P632 | P655 | P638

P845 | P639 | P654 | P642 | P613

P842 P843

P637 | P831 | P832 | P839

P841 | P840 | P600 | P614 | P640

P864 | P678

P827 | P826 | P821/P822

P680

P803 | P850

P601

P877

P870

P714 P704 P743 P744 P702 P621 P625 P732 C88-P800

(C91)

(C94)
P603 | P604 | P605 | P600 | P601 | P602 | P606

(C91)
P607 | P603 | P600 | P612 | P601 | P604 | P608

(C91)
P645 | P614 | P613 | P620 | P609

(C91)
P633 | P630 | P642 | P631 | P632

P801 | P800(B) | P800

(C91)
P637 | P636
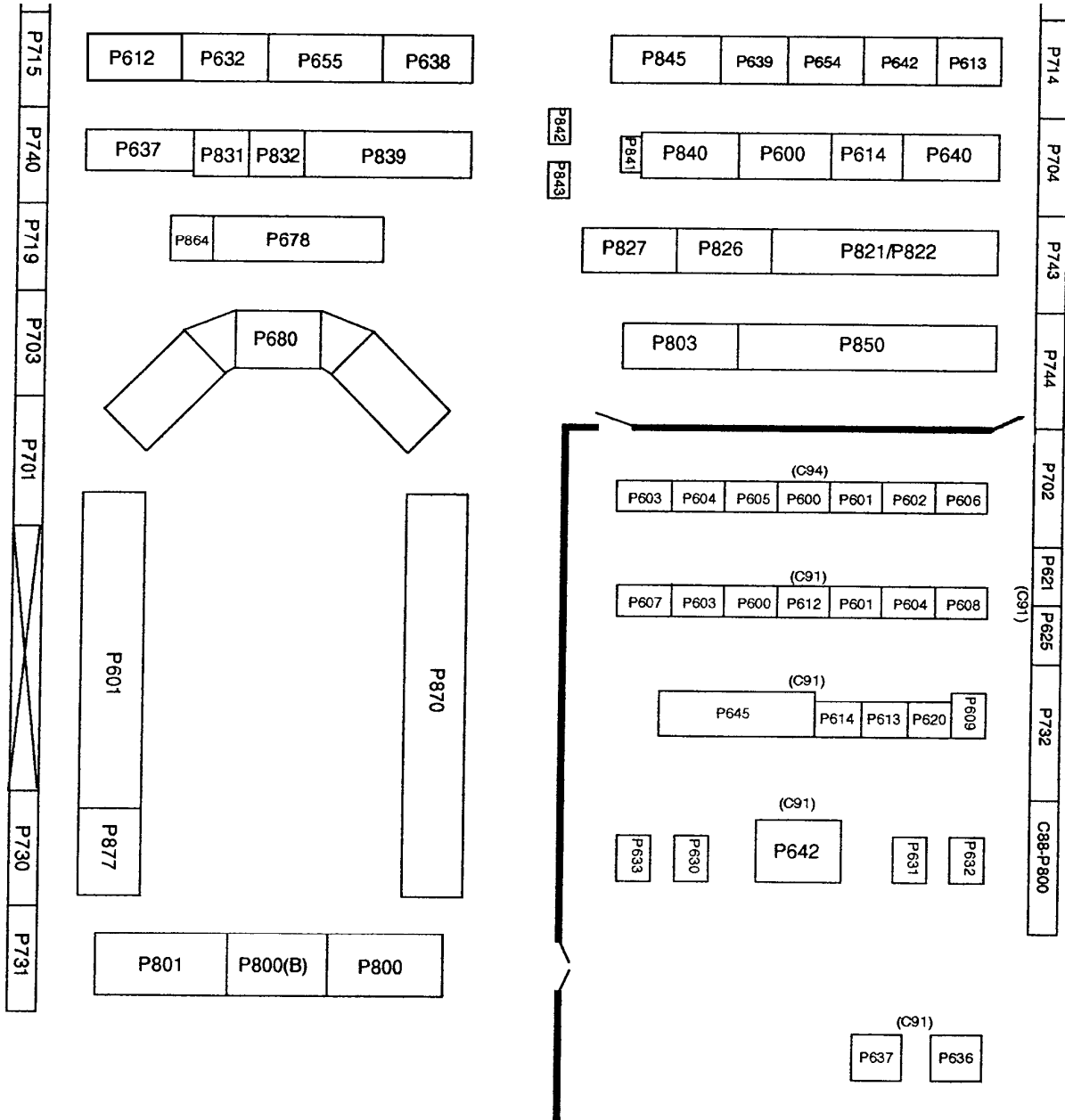
Clinton Power Station
Job Performance Measure (JPM)
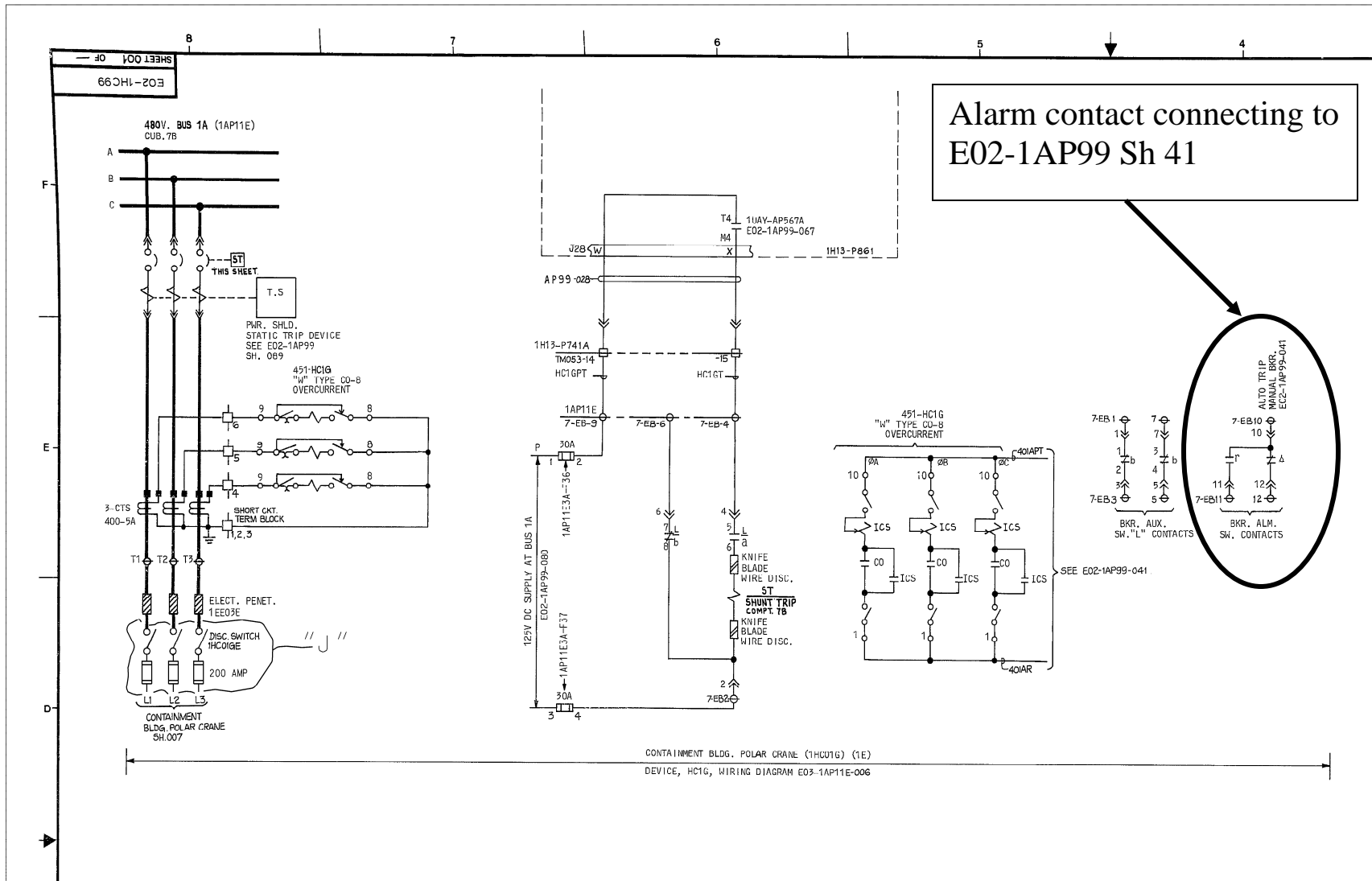
Alarm contact connecting to E02-1AP99 Sh 41
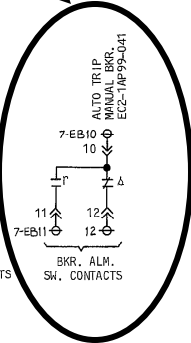
E02-1HC99 Sh 01

Annunciator 5060 5C

Alarm Contact from E02-1HC99

Exelon SM

Nuclear
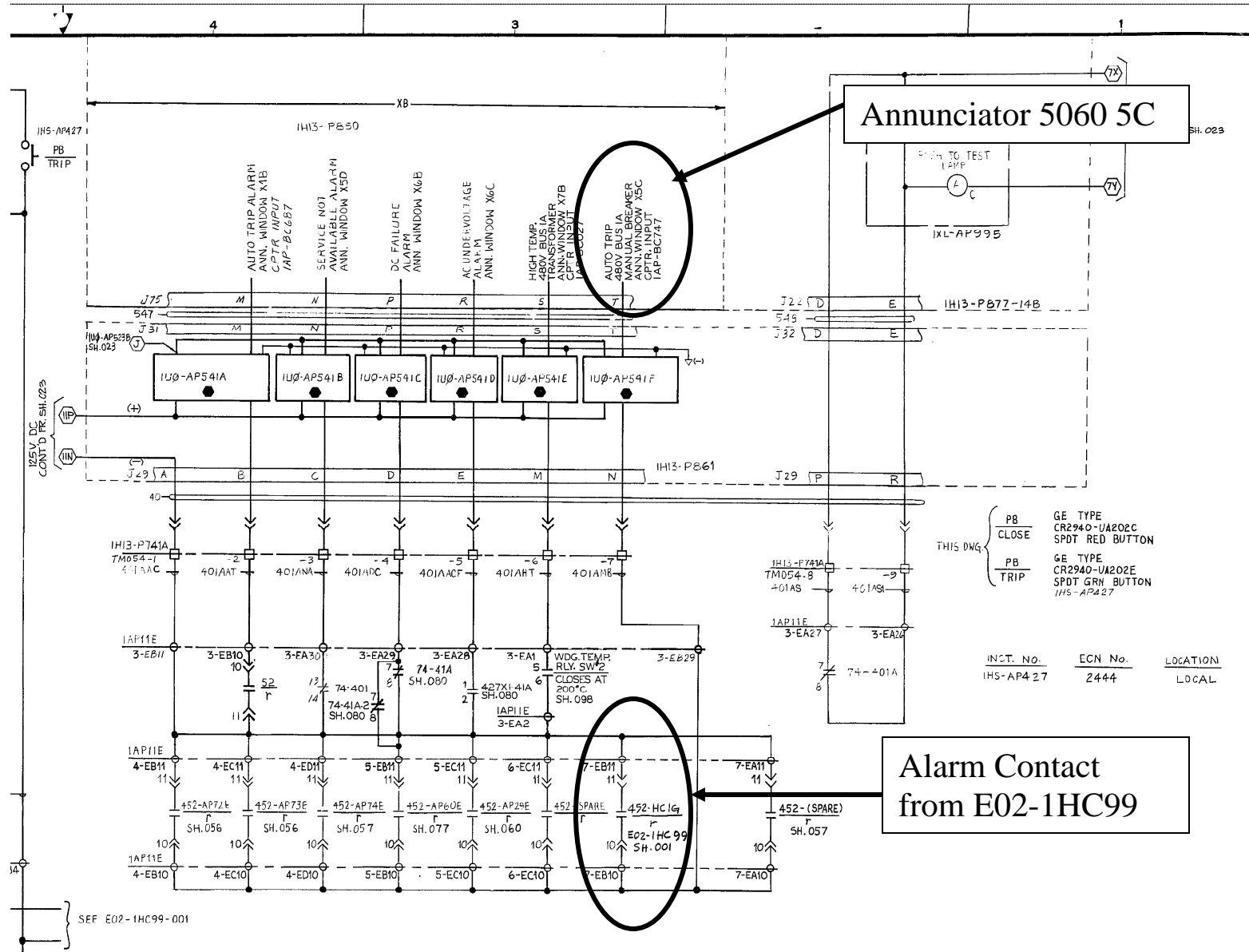
CLINTON POWER STATION

Job Performance Measure

Perform Surveillance 9820.01 Power Distribution Limits

JPM Number: JPM10002

Revision Number: 00

Date: 2/9/07

Developed By:	**Tom Pickley**	**2/9/07**
	Instructor	**Date**
Reviewed By:	**Stacey Hagan**	**6/15/07**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

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

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

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and

b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____   _____
SME/Instructor   Date

_____   _____
SME/Instructor   Date

_____   _____
SME/Instructor   Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
0	2/9/07	New JPM

Simulator Setup Instructions

(This page is applicable only to JPMs performed in the Simulator.)

1. Attach the 3D Monicore Case to the copy of 9820.01D001.

2. Printout a copy of 9820.01, Power Distribution Limits for the student.

3. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

> I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.
>
> No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

- The RO completes the datasheet using the 3D Monicore Case showing a bundle with its MAPRAT and MFLPD greater than one.

- CPS No. 9820.01 Power Distribution Limits, Revision 33c.

- CPS No. 9820.01D001 Power Distribution Limits Data Sheet, Revision 32d.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None

PROCEDURAL/REFERENCES:

- CPS No. 9820.01 Power Distribution Limits, Revision 33c.

- CPS No. 9820.01D001 Power Distribution Limits Data Sheet, Revision 32d.

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

- When the initiating cue is read, provide the student with a copy of 9820.01D001 and the 3D Monicore Printout.

- All pre-job briefings are completed.

-

INITIAL CONDITIONS:

The unit is near rated conditions. A rod shuffle was completed one hour ago.

INITIATING CUE:

You are the B RO. You are to complete 9820.01 Power Distribution Limits surveillance. The evaluator will act as all other crew members.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

9820.01D001 Power Distribution Limits Data Sheet

---

*8.1   **Run an official 3D Case**

Standard:	Depresses F7 on the 3D Monicore computer.
Cue:	Hand the student the attached 3D Case
Comments	

SAT ☐   UNSAT ☐   Comment Number _____

9820.01D001 Power Distribution Limits Data Sheet

---

*8.2   **The RO does not initial step 8.2 because the 3D Monicore case shows a bundle with MAPRAT greater than 1.00.**

Standard:	RO determines that MAPRAT is out of specification.
Cue:	If the student notifies SMngt, acknowledge the notification and direct to complete the surveillance.
Comments	

SAT ☐   UNSAT ☐   Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

8.3 The RO initials step 8.3.

Standard: RO determines that MFLCPR is in specification.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

*8.4 The RO does not initial step 8.4 because the 3D Monicore case shows a bundle with MFLPD greater than 1.00.

Standard: RO determines that MFLPD is out of specification.

Cue: If the student asks if they are required to review technical specifications tell them to do what they would do on shift as the RO.

Comments

SAT ☐ UNSAT ☐ Comment Number _____

8.5 Immediately contacts Shift Management that MAPRAT and MFLPD are out of specification.

Standard: Shift Management is notified.

Cue: Ask which, if any, Technical Specification entry level conditions have been met.

Comments

SAT ☐ UNSAT ☐ Comment Number _____

---

    *   **Determines the following LCO entry conditions have been met:**
        LCO 3.2.1 APLHGR
        LCO 3.2.3 LHGR.

Standard:	LCOs for APLHGR and LHGR are identified
Cue:	Acknowledge the notification.
Comments	.

    SAT ☐   UNSAT ☐   Comment Number _____

    8.6   Notify SMngt of surveillance completion.

Standard:	SMngt is notified.
Cue:	Acknowledge the notification.
Comments	.

    SAT ☐   UNSAT ☐   Comment Number _____

    8.7   Sign and date the 3D Case and attached to CPS 9820.01D001

Standard:	3D Case is Signed and dated and attached.
Cue:	Acknowledge the notification.
Comments	.

    SAT ☐   UNSAT ☐   Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

TERMINATING CUES:

The JPM is complete when the student has determined that the APLHGR and LHGR limits have been exceeded.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: □ NLO   ■ RO   □ SRO   □ STA   □ SRO Cert

JPM Title: Perform Surveillance 9820.01 Power Distribution Limits

JPM Number: JPM10002   Revision Number: 0

Task Number and Title: (982001.01) Evaluate Core Thermal Limits during Power Operations.

K/A System	K/A Number	Importance (RO/SRO)	
	2.1.33	3.4	4.0

   Suggested Testing Environment: Simulator

      Actual Testing Environment: □ Simulator   □ Plant   □ Control Room

   Testing Method: □ Simulate   **Faulted:**   □ Yes   ■ No
                           ■ Perform   **Alternate Path:**   □ Yes   ■ No

      Time Critical: □ Yes   ■ No

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

References: CPS No. 9820.01 Power Distribution Limits, Revision 33d.

                    CPS No. 9820.01D001 Power Distribution Limits Data Sheet, Revision 32d.

EVALUATION SUMMARY:

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

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

Comments: _____

_____

_____

_____

_____

_____

      Evaluator's Name: _____ (Print)

   Evaluator's Signature: _____   Date: _____

Initial Conditions

The unit is near rated conditions. A rod shuffle was completed one hour ago.

INITIATING CUE:

You are the B RO. You are to complete 9820.01 Power Distribution Limits surveillance. The evaluator will act as all other crew members.

```
CORE PARAMETERS                    3D MONICORE              ┌──────────┐  CALCULATED
POWER   MWT     3372               PERIODIC LOG             │ XXXXXX   │  PRINTED
POWER   MWE     1140.6                                      └──────────┘  CASE ID  FMLD1  070607082156
FLOW    MLB/HR  83.571             CALC RESULTS                           RESTART  FMLD1  070607082156
FPAPDR          *****                                                     LPRM SHAPE - FULL CORE
SUBC    BTU/LB  21.85              Keff          0.9999
PR      PSIA    1037.6             XEWORTH %     -2.37      LOAD LINE SUMMARY
CORE    MWD/sT  21573.8            XE/RATED      0.94       CORE POWER          97.1 %
CYCLE   MWD/sT  9000               FLLLP         0.97       CORE FLOW           98.9 %
MCPR            1.56                                        LOAD LINE           97.8 %
```

```
CORRECTION FACTOR:          MFLCPR= 1.043      MFLPD= 0.967      MAPRAT=     0.967
OPTION: ARTS                2 LOOPs ON         MANUAL FLOW       MCPRLIM=    1.329
        MOST LIMITING LOCATIONS (NON-SYMMETRIC)
```

MFLCPR	LOC	MFLPD	LOC	MAPRAT	LOC	PCRAT	LOC
0.852	41-36	1.001	35-20-11	1.001	35-20-11	N/A	N/A
0.852	43-34	0.813	37-36-10	0.793	37-36-11	N/A	N/A
0.851	35-16	0.812	37-38-10	0.792	37-38-10	N/A	N/A
0.850	33-14	0.812	35-36-11	0.791	37-30-12	N/A	N/A
0.850	43-38	0.811	37-30-12	0.791	35-30-12	N/A	N/A
0.849	43-30	0.810	29-20-11	0.790	35-36-11	N/A	N/A
0.848	41-40	0.810	35-30-11	0.790	29-20-11	N/A	N/A
0.848	39-38	0.809	41-34- 8	0.789	29-22-12	N/A	N/A
0.847	45-32	0.809	29-22-12	0.788	41-34- 8	N/A	N/A
0.846	29-14	0.808	33-16- 8	0.788	29-28-11	N/A	N/A

```
SEQ. A1   C=MFLCPR    D=MFLPD      M=MAPRAT      P=PCRAT    *=MULTIPL
53
```

NOTCH	REL PW	LOC
	0.155	25
00	0.269	24
02	0.6	23
04	0.745	22
06	0.86	21
08	0.971	20
10	1.03	19
12	1.059	18
14	1.099	17
16	1.084	16
18	1.128	15
20	1.213	14
22	1.234	13
24	1.287	12
26	1.317	11
28	1.304	10
30	1.295	09
32	1.3	08
34	1.282	07
36	1.261	06
38	1.254	05
40	1.189	04
42	1.031	03
46	0.788	02
48	0.245	01

CORE AVE AXIAL (chart)

```
53
49
 L
45
41
 L
37                    42        10        42
                                           C
33
 L
29                    10                  10
25
 L
21                    42        10        42
                                 *
17
 L
13
09
 L
05
      L     L     L     L     L     L
      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	1.021	1.264	1.153	1.187	1.27	1.112	0.612

CALIBRATED LPRM READINGS

XXXXXX	CALCULATED
	PRINTED

CASE ID FMLD1021029065847
LPRM SHAPE - FULL CORE

```
47 D          25.5   32.3   34.0   29.4   20.0
   C          41.1   51.1   50.0   45.6   31.6
   B          48.1   59.3   56.8   52.5   36.3
   A          41.6   58.3    0.0   55.0   26.1

39 D   22.2   34.2   39.6   42.6   38.0   29.7
   C   34.9   52.0   60.2   51.5   55.1   48.0
   B   41.8   59.5   67.3   55.7   64.1   56.5
   A   35.6   61.0   52.0   44.9   60.2   55.6

31 D   28.3   40.4   39.2   39.3   39.9   35.0
   C   42.7   50.3   54.2   55.8   56.8   52.7
   B   49.9   57.4   58.4   60.5   64.2   60.2
   A    0.0   53.2    0.0   54.7   44.4   57.3

23 D   26.8   38.1   38.3   41.2   45.0   33.7
   C   42.4   58.4   54.1   56.7   54.0   49.6
   B   49.8   69.3   60.7   61.8   55.7   58.0
   A   41.6   58.4    0.0   55.3   53.3   58.4

15 D   17.6   32.9    0.0   39.6   35.0   25.3
   C   29.6   50.2   49.0   56.2   53.6   39.6
   B   32.8   58.3   55.5   64.8   62.4   47.5
   A   22.6   55.8   56.7   51.3   64.5   41.9

 7 D          19.2   25.6   26.5   22.5
   C          31.2   39.3   42.7   35.6
   B          33.2   46.6   49.0   42.6
   A           0.0   42.6   45.1   34.6

         6    14     22     30     38     46
```

FAILED SENSORS:
LPRM (6 SIGNAL FAILED)
631A 1407A 2215D 2223A
2231A 3047A
LPRM (0 PANACEA REJECTED)
OTHER SENSORS (0 TOTAL)
SUB RODS
     NONE

T = TIP RUN RECOMMENDED
C = MFLCPR LOCATION
M = MAPRAT LOCATION
D = MFLPD LOCATION
P = PCRAT LOCATION
* = MULTIPLE LIMIT

+ = CTP/WT OUT OF RANGE

CORE SUMMARY

CORE POWER	97.1	CALC SUB FLOW	98.2%	DP MEAS PSI	18.76
CORE FLOW	98.9%	OPER SUB FLOW	-1.2%	DP CALC PSI	19.42
LOAD LINE	97.8%	FLOW BASIS	MEAS	FEEDWTR FLOW MLB/HR	14.68

APRM CALIBRATION

	A	B	C	D
READING	96.8	97.1	97.0	97.1
AGAF	1.003	1.000	1.001	1.000
APRM - %CTP	-0.3	0.0	-0.1	0.0

TIP RUNS RECOMMENDED
STRINGS: NONE

CLINTON POWER STATION

Job Performance Measure

Review Surveillance 9820.01 Power Distribution Limits

JPM Number: 10110001SAF01

Revision Number: 00

Date: 8/6/06

Developed By:	Fred Worrell	8/6/06
	Instructor	**Date**
Reviewed By:	Stacey Hagan	6/15/07
	Operations Representative	**Date**

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

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

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

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and

b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

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

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
0	8/6/06	New JPM

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

(This page is applicable only to JPMs performed in the Simulator.)

1. Markup a copy of 9820.01D001 Power Distribution Limits Data Sheet to match the attached example

2. Sign, date and attach the 3D Monicore Case to the copy of 9820.01D001.

3. Printout a copy of 9820.01, Power Distribution limits for the student.

4. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

- The CRS review finds the mistake on the datasheet showing all thermal limits are in specification which is in conflict with the 3D Monicore Case showing a bundle with a MFLCPR of greater than one. The CRS determines that Tech Spec action and a power reduction is required.

- CPS No. 9820.01 Power Distribution Limits, Revision 33c.

- CPS No. 9820.01D001 Power Distribution Limits Data Sheet, Revision 32d.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None

PROCEDURAL/REFERENCES:

- CPS No. 9820.01 Power Distribution Limits, Revision 33c.

- CPS No. 9820.01D001 Power Distribution Limits Data Sheet, Revision 32d.

- Technical Specifications 3.2.2

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

- When the initiating cue is read, provide the student with the marked up copy of 9820.01D001 with the attached 3D Monicore Printout.

- All pre-job briefings are completed.

Clinton Power Station
Job Performance Measure (JPM)

•

INITIAL CONDITIONS:

The unit is at full power. A rod shuffle was completed one hour ago. The B RO has just completed 9820.01 Power Distribution Limits surveillance.

INITIATING CUE:

You are the CRS. Review the completed surveillance data sheet, CPS No. 9820.01D001, Power Distribution Limits Data Sheet and take any required actions.

The evaluator will act as all other crew members.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

9820.01D001 Power Distribution Limits Data Sheet

---

*8.3	**The CRS reviews the completed datasheet and notes that step 8.3 was incorrectly marked indicating MFLCPR was less than 0.98 when the 3D Monicore case shows a bundle with MFLCPR is greater than 1.00.**
Standard:	CRS determines that the data sheet was not correctly filled out and MFLCPR is out of specification.
Cue:	If the student asks if they are required to review technical specifications tell them to do what they would do on shift as the CRS.
Comments	

SAT ☐   UNSAT ☐   Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

---

*3.2.2 **Technical Specifications – Minimum Critical Power Ratio (MCPR)**

Standard:	The CRS reviews the Technical Specification and enters Action 3.2.2.A.1 to restore to less than the limit within 2 hours.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

---

* **CRS contacts the Reactor Engineer (RE) for instructions to restore MFLCPR to within limits within 2 hours.**

Standard:	CRS determines that a power reduction is needed.
Cue:	If the CRS consults with the RE, tell them you will develop a plan and ask what do they suggest.
Comments	The critical step is met when the CRS has determined a power reduction is needed. It is acceptable to seek guidance from the RE to resolve the thermal limit problem.

SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

The JPM is complete when the student has determined that the MFLCPR limit has been exceeded and determined a power reduction is required.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ■ SRO ☐ STA ☐ SRO Cert

JPM Title: Review Surveillance 9820.01 Power Distribution Limits

JPM Number: 10110001SAF01 Revision Number: 0

Task Number and Title: (101100.01) Apply the administrative requirements of SURVEILLANCE TESTING PROGRAM

K/A System	K/A Number	Importance (RO/SRO)	
	2.1.12	N/A	4.0

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate **Faulted:** ☐ Yes ■ No
■ Perform **Alternate Path:** ☐ Yes ■ No

Time Critical: ☐ Yes ■ No

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

References: CPS No. 9820.01 Power Distribution Limits, Revision 33d.

CPS No. 9820.01D001 Power Distribution Limits Data Sheet, Revision 32d.

EVALUATION SUMMARY:

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

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

Comments: _____

_____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Clinton Power Station
Job Performance Measure (JPM)

Initial Conditions

The unit is at full power. A rod shuffle was completed one hour ago. The B RO has just completed 9820.01 Power Distribution Limits surveillance.

Initiating Cue

You are the CRS. Review the completed surveillance data sheet, CPS No. 9820.01D001, Power Distribution Limits Data Sheet and take any required actions.

The evaluator will act as all other crew members.

POWER DISTRIBUTION LIMITS DATA SHEET

SCOPE OF REVISION:

- C1R08 updates:
   ° Incorporated new ITS/ORM power/1st stage pressure values per
      ECs 331403, 331404, 331564, 331565.

❶ Specific Rev. 32a [Sheffield]: CR 147421 - SOD: MFLCPR ITS Thermal Limit
   lowered by 0.02 to 0.98 (vice 1.00) until 3D Monicore updated to account for
   channel bow (2% penalty). Administrative thermal limits (2% margin) imposed by
   MWROG Nuclear Fuels 1/9/03 directive letter adjusted accordingly.

❷ Specific Rev. 32b [Landin]: ATI-PCR 155337-01:
   CR 147421: MFLCPR ITS Thermal Limit returned to 1.00 per final GNF MFN 03-012
   that concludes that the original 2% MCPR penalty for CPS does not apply.

❸ Specific Rev. 32c [Landin]: C1R09 -
   ° Incorporated EC 344216 - 3D Monicore/Panac11 changes noun name Descriptors.

❹ Specific Rev. 32d [Landin]: EDITORIAL - 5.6 typo correction.

<div style="border:2px solid black; text-align:center;">

ROUTINE USE

</div>

ORIGINATOR: *Thomas J. Landin*   **CLASS CODE:** *SNND1*

SQR: *Kevin Kane*   **APPROVAL DATE:** *MAR 13 2002*

CURRENT CHANGES TO GENERAL REVISION

	Change #	*Date*	*List of Affected Pages*
❶	32a	03/11/03	1, 2
❷	32b	04/28/03	1, 2
❸	32c	02/04/04	1, 2
❹	32d	06/14/04	1, 2
❺			

POWER DISTRIBUTION LIMITS DATA SHEET

5.1 SMngt notification.   Date **Today**   Time **Now**   *FEW*

❶ 5.2 Verify Core Thermal Power ≥ 21.6% RTP.   *FEW*

5.3 Check the applicable entry condition:

   ❑   Daily surveillance (at least once per 24 hours)

❶   ❑   Within 12 hours after ≥ 21.6% RTP

   ❑   Within 12 hours of entering single loop RR operations

   ■   Other (explain) __**Performed due to rod shuffle**_____

   _____

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

5.5 ■ 2 RR pumps in operation   5.6 ■ ARTS

   ❑   1 RR pump in operation   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	*FEW*
8.3	MFLCPR	≤ 0.98	≤ 1.0	*FEW*
8.4	MFLPD	≤ 0.98	≤ 1.0	*FEW*

❶❷ (to left of rows 8.3)

8.6 Inform SMngt of
     surveillance completion   Date Today__ Time __Now___ __ *FEW* __

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. _____N/A_____
   Initiated Work Document No. _____N/A_____

Comments/Deficiencies

__None_____

_____

Review and Approval

SMngt Review: _____
                  (Signature)   (Date)

```
CORE PARAMETERS                                                    XXXXXX    CALCULATED
POWER    MWT     3376                                                        PRINTED
POWER    MWE     1141.7                                           CASE ID   FMLD1  070607091251
FLOW     MLB/HR  83.571              CALC RESULTS                 RESTART FMLD1   070607091251
FPAPDR           *****                                            LPRM SHAPE - FULL CORE
SUBC     BTU/LB  21.82               Keff          0.9999
PR       PSIA    1037.8              XE WORTH %    -2.37          LOAD LINE SUMMARY
CORE     MWD/sT  21573.8             XE/RATED      0.94           CORE POWER          97.2 %
CYCLE    MWD/sT  9000                FLLLP         0.97           CORE FLOW           98.9 %
MCPR             1.56                                             LOAD LINE           97.9 %
```

```
CORRECTION FACTOR:        MFLCPR= 1.043      MFLPD= 0.967     MAPRAT=      0.967
OPTION: ARTS              2 LOOPs ON         MANUAL FLOW      MCPRLIM=     1.329
```

MOST LIMITING LOCATIONS (NON-SYMMETRIC)

MFLCPR	LOC	MFLPD	LOC	MAPRAT	LOC	PCRAT	LOC
1.001	41-36	0.956	35-20-11	0.932	35-20-11	N/A	N/A
0.999	43-34	0.954	37-36-10	0.930	37-36-11	N/A	N/A
0.999	35-16	0.954	37-38-10	0.930	37-38-10	N/A	N/A
0.999	33-14	0.954	35-36-11	0.930	37-30-12	N/A	N/A
0.999	43-38	0.954	37-30-12	0.930	35-30-12	N/A	N/A
0.998	43-30	0.953	29-20-11	0.929	35-36-11	N/A	N/A
0.997	41-40	0.952	35-30-11	0.928	29-20-11	N/A	N/A
0.997	39-38	0.952	41-34- 8	0.928	29-22-12	N/A	N/A
0.996	45-32	0.951	29-22-12	0.927	41-34- 8	N/A	N/A
0.995	29-14	0.950	33-16- 8	0.926	29-28-11	N/A	N/A

```
SEQ. A1     C=MFLCPR      D=MFLPD        M=MAPRAT        P=PCRAT     *=MULTIPL     CORE AVE AXIAL
53                                                                             NOTCH   REL PW  LOC
                                                                                       0.155    25
49                                                                               00    0.269    24
 L                                                                               02    0.6      23
45                                                                               04    0.745    22
                                                                                 06    0.86     21
41                                                                               08    0.971    20
 L                                                                               10    1.03     19
37                           42            10            42                      12    1.059    18
                                                          C                      14    1.099    17
33                                                                               16    1.084    16
 L                                                                               18    1.128    15
29                           10                          10                      20    1.213    14
                                                                                 22    1.234    13
25                                                                               24    1.287    12
 L                                                                               26    1.317    11
21                           42            10            42                      28    1.304    10
                                            *                                    30    1.295    09
17                                                                               32    1.3      08
 L                                                                               34    1.282    07
13                                                                               36    1.261    06
                                                                                 38    1.254    05
09                                                                               40    1.189    04
 L                                                                               42    1.031    03
05                                                                               46    0.788    02
       L         L         L         L         L         L                       48    0.245    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	1.021	1.264	1.153	1.187	1.27	1.112	0.612

CALIBRATED LPRM READINGS

XXXXXX	CALCULATED

PRINTED

CASE ID FMLD1021029065847
LPRM SHAPE - FULL CORE

47 D		25.5	32.3	34.0	29.4	20.0
C		41.1	51.2	50.0	45.7	31.7
B		48.1	59.4	56.8	52.6	36.3
A		41.6	58.3	0.0	55.0	26.1
39 D	22.2	34.2	39.6	42.6	38.0	29.7
C	34.9	52.1	60.2	51.5	55.1	48.0
B	41.9	59.6	67.3	55.8	64.2	56.5
A	35.6	61.1	52.1	44.9	60.2	55.7
31 D	28.4	40.5	39.2	39.3	39.9	35.1
C	42.7	50.4	54.3	55.9	56.8	52.8
B	49.9	57.5	58.4	60.6	64.3	60.2
A	0.0	53.2	0.0	54.7	44.4	57.4
23 D	26.9	38.1	38.3	41.2	45.0	33.8
C	42.5	58.4	54.2	56.7	54.1	49.6
B	49.8	69.4	60.8	61.8	55.8	58.1
A	41.6	58.4	0.0	55.3	53.3	58.4
15 D	17.6	32.9	0.0	39.6	35.1	25.3
C	29.6	50.2	49.1	56.3	53.6	39.6
B	32.8	58.3	55.6	64.9	62.5	47.6
A	22.6	55.9	56.7	51.3	64.6	42.0
7 D		19.2	25.6	26.6	22.5	
C		31.2	39.3	42.7	35.6	
B		33.2	46.6	49.1	42.6	
A		0.0	42.6	45.1	34.6	
	6	14	22	30	38	46

FAILED SENSORS:
LPRM (6 SIGNAL FAILED)
631A 1407A 2215D 2223A
2231A 3047A
LPRM (0 PANACEA REJECTED)
OTHER SENSORS (0 TOTAL)
SUB RODS
　　　NONE

T = TIP RUN RECOMMENDED
C = MFLCPR LOCATION
M = MAPRAT LOCATION
D = MFLPD LOCATION
P = PCRAT LOCATION
* = MULTIPLE LIMIT

+ = CTP/WT OUT OF RANGE

CORE SUMMARY

CORE POWER	97.2	CALC SUB FLOW	98.2%	DP MEAS PSI	18.82
CORE FLOW	98.9%	OPER SUB FLOW	-1.2%	DP CALC PSI	19.48
LOAD LINE	97.9%	FLOW BASIS	MEAS	FEEDWTR FLOW MLB/HR	14.70

APRM CALIBRATION

	A	B	C	D
READING	96.9	97.2	97.1	97.2
AGAF	1.003	1.000	1.001	1.000
APRM - %CTP	-0.3	0.0	-0.1	0.0

TIP RUNS RECOMMENDED
STRINGS:　　NONE

CLINTON POWER STATION

Job Performance Measure

Calculate Reactor Coolant System Leakage

JPM Number: 900001.0102

Revision Number: 01

Date: 03/15/2007

Developed By:	**Tom Pickley**	**3/15/07**
	Instructor	**Date**
Reviewed By:	**Stacey Hagan**	**6/15/07**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

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

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

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and

b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____   _____
SME/Instructor   Date

_____   _____
SME/Instructor   Date

_____   _____
SME/Instructor   Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
Rev 01	03/15/07	Updated procedure Revs and template.

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

(This page is applicable only to JPMs performed in the Simulator.)

1. Initialize in a Mode 1 IC.

2. Turn the recorders OFF.

3. Present the attached, completed copy of CPS 9000.01D001, Control Room Surveillance Log – Mode 1, 2, 3 Data Sheet, Section 8.9 to the examinee for calculation of DW Floor Drain Sump Flow Rate.

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

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

5. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

> I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.
>
> No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

- Reactor Coolant Leakage verification and calculation has been performed per CPS 9000.01D001, Control Room Surveillance Log – Mode 1, 2, 3 Data Sheet, Section 8.9.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None

PROCEDURAL/REFERENCES:

- CPS 9000.01, CONTROL ROOM SURVEILLANCE LOG, Revision 34

- CPS 9000.01D001, CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3, DATA SHEET, Revision 50, Section 8.9

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

- Do NOT allow examinee to shine any type light into a panel.

- All pre-job briefings are completed.

Clinton Power Station
Job Performance Measure (JPM)

-

INITIAL CONDITIONS:

You are an extra RO on shift. It is 16:00 hrs on the Swing shift and CPS 9000.01D001, Control Room Surveillance Log – Mode 1, 2, 3, is in progress.

INITIATING CUE:

<div style="border: 1px solid black; padding: 8px;">

CAUTION

- All pre-job briefings are completed.
- No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur. (This statement should be removed if this is a Simulator JPM)
- Do NOT shine any type light into a panel.

</div>

The CRS has directed you to perform verification and calculation of Reactor Coolant leakage, Drywell Floor Drain Sump section, using CPS 9000.01D001, Control Room Surveillance Log – Mode 1, 2, 3.

Other operators are performing the remaining sections of CPS 9000.01D001.

START TIME: _____

**Clinton Power Station
Job Performance Measure (JPM)**

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

CPS 9000.01D001

---

* 1	**Locate Drywell Floor Drain flow recorders and totalizers at 1H13-P855.**

Standard:	Proceeds to P855 and locates DW FLR DRN FLOW recorders and totalizers.
Cue:	If asked, recorders 1E31-R551 and 1E31-R552, and the totalizers are operable.
Comments	The recorders are de-energized to allow the evaluator to provide values from the recorders and totalizers when asked.

SAT ☐   UNSAT ☐   Comment Number _____

---

*2. 8.9.1.b	**Record DW FLR FLOW FROM SUMP TOTAL.**

Standard:	Obtains value from totalizer and records per 8.9.1.b).
Cue:	When asked, DW FLR FLOW FROM SUMP TOTAL is reading 054307.
Comments	

SAT ☐   UNSAT ☐   Comment Number _____

**Clinton Power Station
Job Performance Measure (JPM)**

---

*3.   8.9.2.c   Record DW FLR DRN (SUMP) FLOW, LOW RANGE 1E31-R552, Channel 1.

Standard:	Obtains value from 1E31-R552, Channel 1 and records per 8.9.2.c).
Cue:	When asked, cue that 1E31-R552, Channel 1 is reading 2.3.
Comments	1E31-R552, Channel 1 is preferred source.

SAT ☐   UNSAT ☐   Comment Number _____

---

4.   8.9.2.d
      8.9.2.e   Verify current DW Floor Drain flow is within limits and initial applicable space per 8.9.2.d and 8.9.2.e.

Standard:	Compares DW Floor Drain flow reading from 8.9.2.c with limits stated in 8.9.2.d and 8.9.2.e. Determines the stated limits have not been exceeded.
Cue:	
Comments	

SAT ☐   UNSAT ☐   Comment Number _____

---

*5.   8.9.3.b   Perform Unidentified Leakage calculation per 8.9.3:

b.   Record current value of DW FLR FLOW SUMP TOTAL from 8.9.1.b

Standard:	The current value of DW FLR FLOW SUMP TOTAL from 8.9.1.b is recorded in the appropriate space.
Cue:	
Comments	Should record 054307

SAT ☐   UNSAT ☐   Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

---

*6   8.9.3.c   Record the value of DW FLR FLOW SUMP TOTAL taken ~24 before

Standard: The value of DW FLR FLOW SUMP TOTAL taken ~24 before is recorded in the
                 appropriate space.

Cue:

Comments   Should record 051043

                 SAT ☐   UNSAT ☐   Comment Number _____

---

*7.   8.9.3.d)   Record total number of gallons by subtracting c) from b).

Standard: Performs 054307 – 051043 and records 3264

Cue:

Comments   Should record 3264 gal

                 SAT ☐   UNSAT ☐   Comment Number _____

---

*8.   8.9.3.e)   Record the number of minutes since reading ~24 hours before (from 8.9.3.c)

Standard: The number of minutes since reading of ~ 24 hrs before is recorded.

Cue:

Comments   Should record 1440 min

                 SAT ☐   UNSAT ☐   Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

---

*9. 8.9.3.f)	**Record flow rate since last reading: Reading from d) divided by elapsed time e)**	
Standard:	Performs 3264 ÷ 1440 and records 2.27 gpm in the appropriate space	
Cue:		
Comments	Should record 2.27 gpm	
	SAT ☐ UNSAT ☐	Comment Number _____

---

10. 8.9.3.g)	Record the DW FLR DRN (SUMP) FLOW, LOW RANGE from Recorder 1E31-R552, Channel 1.	
Standard:	Records 2.3 in the appropriate space.	
Cue:	If asked to confirm, cue that 1E31-R552, Channel 1 reading is 2.3	
Comments	Examinee may request confirmation that 1E31-R552, Channel 1 reading is 2.3, or may enter value from 8.9.2.c).	
	SAT ☐ UNSAT ☐	Comment Number _____

---

11. 8.9.3.h	Record the DW FLR DRN (PUMP) FLOW, LOW RANGE from Recorder 1E31-R551, Channel 1.	
Standard:	Locates 1E31-R551Channel 1 and requests current value. Records the cued value in the appropriate space.	
Cue:	When asked, cue that Recorder 1E31-R551, Channel 1 is reading 2.3	
Comments		
	SAT ☐ UNSAT ☐	Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

12. 8.9.3.i)	Perform Channel Check of the calculated DW Floor Drain Sump flow rate [Step f) above] and DW FLOOR DRAIN (SUMP) and (PUMP) FLOW rates [from g) and h) above]. Enter initials in appropriate space.	
	Comparison Guideline: 1.4 gpm	

Standard:	Compares flow value calculated in 8.9.3.f) with values obtained from recorders 1E31-R552 and 1E31-R551 in 8.9.e.g) and 8.9.3.h).
	Determines the Comparison Guideline of 1.4 gpm has not been exceeded.
	Enters initials in the appropriate space.

Cue:	
Comments	

SAT ☐   UNSAT ☐   Comment Number _____

TERMINATING CUES:

DW Floor Drain leakage calculations are completed and determination made that no unidentified leakage limits have been exceeded.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO   ☐ RO   ☐ SRO   ☐ STA   ☐ SRO Cert

JPM Title: Calculate Reactor Coolant System Leakage

JPM Number: 900001.0102   Revision Number: 01

Task Number and Title: 900001.01 Control Room Surveilance Log

K/A System	K/A Number	Importance (RO/SRO)	
GENERIC	2.2.12	3.0	3.4

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator   ☐ Plant   ☐ Control Room

Testing Method: ☐ Simulate   **Faulted:**   ☐ Yes   ■ No
                               ■ Perform   **Alternate Path:**   ☐ Yes   ■ No

Time Critical: ☐ Yes   ■ No

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

References: CPS 9000.01, CONTROL ROOM SURVEILLANCE LOG, Revision 34d
                     CPS 9000.01D001, CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3,
                     DATA SHEET, Revision 50, Section 8.9

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

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

Comments: _____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Initial Conditions

It is 16:00 hrs on the Swing shift and CPS 9000.01D001, Control Room Surveillance Log – Mode 1, 2, 3, is in progress.

Initiating Cue

<div style="border: 1px solid black;">

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

</div>

The CRS has directed you to perform verification and calculation of Reactor Coolant leakage, Drywell Floor Drain Sump section, using CPS 9000.01D001, Control Room Surveillance Log – Mode 1, 2, 3.

Other operators are performing the remaining sections of CPS 9000.01D001.

MON	TUE	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE

NOTE

CPS 4001.01, Reactor Coolant Leakage shall be entered if any of the following leakage rates are observed:

- *Any ITS LCO 3.4.5 RCS Operational LEAKAGE limitation is exceeded.*
- *Unidentified LEAKAGE increase of ≥ 0.5 gpm in a 4 hour period (1.0 gpm in 8 hours).*
- *Unidentified LEAKAGE exceeds 2.5 gpm.*

1. (Record)   Flow Readings From 1H13-P855
         (at ≈ 8 hour intervals)

a)   Time readings taken

0000	0005					
0800	0800					
1600	1600					

M
D
S

b)   DW FLR FLOW FROM SUMP TOTAL
(ITS LCO 3.4.5 (a))   M

If the Sump (bubblier level) Flow Detector totalizer in step 8.9.1.b is not functioning, use alternate Pump   D (magnetic motor) Flow Detector totalizer data in step 8.9.1.c for unidentified leakage calculations.   S

048931	052009					
049987	053155					
051043						

c)   DW FLR FLOW PMP DISCH TOTAL
(ITS LCO 3.4.5 (a))   M

D

S

NA	NA					
NA	NA					
NA						

d)   DW EQUIP FLOW
(ITS LCO 3.4.5 (a))   M

If DW Equip Flow Totalizer is not functioning, a Manual Determination of DW RE In-Leakage   D Flow Rate shall be performed using methodology described in CPS 3315.02, Leak Detection (LD)   S and recorded in step 8.9.4.g.1.

NA	NA					
NA	NA					
NA						

MON	TUE	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE (cont'd)

2.   DW Floor Drain Sump Flow Rate Verifications (at ≈ 8 hour intervals)

   a)   Check instrument used:

   If the preferred
   DW FLR DRN (SUMP) FLOW,
   LOW RANGE 1E31-R552, Channel 1
   is not functioning, use the alternate
   DW FLR DRN (PUMP) FLOW,
   LOW RANGE, 1E31-R551, Channel 1.

X SUMP PUMP	**X** SUMP PUMP	SUMP PUMP	SUMP PUMP	SUMP PUMP	SUMP PUMP	SUMP PUMP

   b)   (Record - Monday only) Enter the
   DW FLR DRN FLOW, LOW RANGE values   M
   from Sunday. (From step 8.9.2.c)
                                   D

                               S

2.1						
2.1						
2.2						

   c)   (Record) Enter the
   DW FLR DRN (SUMP) FLOW, LOW RANGE   M
   1E31-R552, Channel 1,
           or alternate   D
   DW FLR DRN (PUMP) FLOW, LOW RANGE
   1E31-R551, Channel 1.   S

2.2	2.3					
2.2	2.3					
2.2						

   d)   (Initial) (MODE 1)
   Verify current DW Floor Drain/   M
   flow rate is ≤ 2 gpm above any
   reading of the previous 24 hours.   D
   (ITS SR 3.4.5.1)
                               S

DS	DS					
BR	BR					
JG						

   e)   (Initial) Verify ≤ 5 gpm on
   DW FLR DRN (SUMP) FLOW, LOW RANGE   M
   1E31-R552 Channel 1
           or alternate   D
   DW FLR DRN (PUMP) FLOW, LOW RANGE
   1E31-R551, Channel 1. (ITS SR 3.4.5.1) S

DS	DS					
BR	BR					
JG						

	MON	TUE	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE (cont'd)

3.   Unidentified Leakage Calculation using Flow Totalizer

a)   Check instrument used:

If the preferred
DW FLR DRN (SUMP) FLOW,
LOW RANGE 1E31-R552, Channel 1
is not functioning, use the alternate
DW FLR DRN (PUMP) FLOW,
LOW RANGE, 1E31-R551, Channel 1.

	MON	TUE	WED	THU	FRI	SAT	SUN
	X SUMP	**X** SUMP	SUMP	SUMP	SUMP	SUMP	SUMP
	PUMP	PUMP	PUMP	PUMP	PUMP	PUMP	PUMP

b)   (Record) The current value of
DW FLR FLOW SUMP TOTAL from step 8.9.1.b or
alternate DW FLR FLOW PMP DISCH TOTAL from
step 8.9.1.c.

c)   (Record) The value of DW FLR SUMP FLOW taken
≈ 24 hours before (DW FLR
FLOW PMP DISCH TOTAL, alternate)

Sunday's value: _____

d)   (Record) The total number of gallons by subtracting
c) from b).

e)   (Record) The number of minutes since reading in
item c).

f)   (Record) Flow rate since last reading: Reading from
d) divided by elapsed time e).

		MON	TUE	WED	THU	FRI	SAT	SUN
M	b)	048931	052099	_____	_____	_____	_____	_____
	c)	045907	048931	_____	_____	_____	_____	_____
	d)	3024	3168	_____	_____	_____	_____	_____
	e)	1440	1445	_____	_____	_____	_____	_____
	f)	2.10	2.19	_____	_____	_____	_____	_____
D	b)	049987	053155	_____	_____	_____	_____	_____
	c)	046915	049987	_____	_____	_____	_____	_____
	d)	3072	3168	_____	_____	_____	_____	_____
	e)	1440	1440	_____	_____	_____	_____	_____
	f)	2.13	2.2	_____	_____	_____	_____	_____
S	b)	051043	_____	_____	_____	_____	_____	_____
	c)	047923	_____	_____	_____	_____	_____	_____
	d)	3120	_____	_____	_____	_____	_____	_____
	e)	1440	_____	_____	_____	_____	_____	_____
	f)	2.17	_____	_____	_____	_____	_____	_____

g)   (Record) Enter the   M

DW FLR DRN (SUMP) FLOW, LOW RANGE   D

from recorder 1E31-R552, Channel 1.   S

	MON	TUE	WED	THU	FRI	SAT	SUN
M	2.1	2.3					
D	2.1	2.3					
S	2.2						

h)   (Record) Enter the   M

DW FLR DRN (PUMP) FLOW, LOW RANGE   D

from recorder 1E31-R551, Channel 1.   S

	MON	TUE	WED	THU	FRI	SAT	SUN
M	2.2	2.4					
D	2.2	2.4					
S	2.2						

	MON	TUE	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE (cont'd)

3.   Unidentified Leakage Calculation using Flow Totalizer (cont'd)

i) (Initial) Perform Channel Check of the calculated DW Floor Drain Sump flow rate (Step f above) and DW FLOOR DRAIN (SUMP) and (PUMP) FLOW rates (g and h above).

MON	TUE	WED	THU	FRI	SAT	SUN
DS/BR/JG	DS/BR/	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 1.4 gpm

If MODE of operation of Sump Pumps (auto/manual) is changed, then at least
2 pump out cycles must occur before a reliable Channel Check can be performed.

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3 DATA SHEET

SCOPE OF REVISION:

- Incorporated Specific Rev's 49a, 49b, 49c and 49d. Rev marks not retained.

- IR 342864: 8.30 - Implemented new ORM TR 4.4.9.1 VX Area Temperature
             monitoring requirements (Pg. 36).

- 8.24.4: Updated single loop to new EPU RTP value found in ITS LCO 3.4.1 (Pg 30)

❶ Specific Rev. 50a [Landin]: IR 298281-03/356167-02: Incorporated ECR 370042
  which changes the RR seal temp daily rise/IR initiation threshold.

❷ Specific Rev. 50b [Landin]: EDITORIAL - Per Amendment 164, updated
  references for H2/O2 Monitors from ITS LCO 3.3.3.1 T8 to ORM OR 2.2.17.

❸ Specific Rev. 50c [Landin}:
  ° Incorporated EC 340118 (Rev's 0 - 4): AST Amendment 167 -
      SLC required OPERABLE in MODE 3 (ITS LCOs 3.1.7).

❹ Specific Rev. 50d [Landin}:
  ° OPRM Project - Incorporated EC 347135:
      ITS SR 3.4.1.2 deletion - part of OPRM implementation.
      Added weekly OPRM Module observation check (ITS LCO 3.3.1.3).
  ° IR 383142-02: Enhanced 8.19 step wording to match label updates.

CONTINUOUS USE

ORIGINATOR *Thomas J. Landin*   **CLASS CODE:** *SNND1*
:

SQR: *Kenneth Sheffield*   **APPROVAL** *06/16/05*
                                                    DATE:

CURRENT CHANGES TO GENERAL REVISION

	Change #	Date	List of Affected Pages
❶	50a	08/04/05	1, 30
❷	50b	08/29/05	1, 36
❸	50c	10/17/05	1, 27
❹	50d	02/09/06	1, 6, 29, 30
❺			

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

5.1 (Record) Inform SMngt of test start Daily and record date/time of notification. Start Time

Weekly Start Date/Time _____/_____

MON	TUE	WED	THU	FRI	SAT	SUN
M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____

> **NOTE:** *Remaining data sheet steps may be performed in any order.*

8.1 (Record) Reactor MODE Switch position.

MON	TUE	WED	THU	FRI	SAT	SUN
M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____

8.2 (Record) Plant Operating MODE.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

8.3 Via NB-ND014, 3D cases, Core Thermal Power (CTP) Inputs [via Plant Status Report] or any other objective means:

1. Record: Reactor Power Level % of RTP.

2. Verify/Initial: 8 hour average thermal power is ≤ 3368 MW thermal.

3. Verify/Initial: Heat Balance inputs valid and in band (when ≥ 21.6% RTP)
[Ref: CPS 2208.01 App A; NF-AB-705 Att 1]

Refer to CPS 3005.01 Limitations as needed.

	MON	TUE	WED	THU	FRI	SAT	SUN
M	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____
D	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____
S	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____	1. ___% 2. _____ 3. _____

8.4 DRYWELL AIRLOCKS [MIDs only]
(N/A if Drywell Closeout complete.)

(Record) Date/time CPS 9861.03 is required for Drywell airlock door seals.

Drywell Airlock (ITS SR 3.6.5.1.1)

MIDs	MIDs	MIDs	MIDs	MIDs	MIDs	MIDs
D _____ T _____	D _____ T _____	D _____ T _____	D _____ T _____	D _____ T _____	D _____ T _____	D _____ T _____

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

MON	TUE	WED	THU	FRI	SAT	SUN

8.5   SURVEILLANCE PROCEDURE TRACKING VERIFICATIONS

° Normally performed/maintained current as recommended irrespective of previous triggered performances.

° For 8.5.1/8.5.2 (normally Day Shift 0800):

   • Enter date/time on applicable lines,
     should always have a 'Next Due' filled in following entry of a 'Completed'.
   • Surveillances normally performed once a day, but extra lines provided in case of multiple performances.
   • Crew should provide 'Next Due' time to on-coming crew during turn-over to ensure 1.25 clock is not missed.
   • N/A blocks not used, forward 'Next Due' date/time to next day.

1. CPS 9820.01, Power   Next Due:
    Distribution Limits
Completed:

    (≥ 21.6% RTP or N/A)   Next Due:
    (ITS SR 3.2.1.1, 3.2.2.1, 3.2.3.1)
Completed:

                                 Next Due:
              Completed:

2. CPS 9041.01,   Next Due:
    Jet Pump Operability Test
Completed:

    (Required for an operating   Next Due:
 loop when ≥ 21.6% RTP or N/A)   Completed:
    (ITS SR 3.4.3.1, MODEs 1 and 2)

3. CPS 9082.01, Offsite Source Power
    Verification completed. (ITS SR 3.8.1.1)   /X/X

4. CPS 9082.02, Electrical Distribution
    Verification completed.   /X/X
    (ITS SR 3.8.7.1, 3.8.9.1)

5. CPS 9094.01D001, Cumulative Data Report
    Data Sheet updated.
    (ITS LCO 3.6.1.1;
     ITS SR 3.6.1.3.3, 3.6.4.3.2, 3.7.3.3;
     ITS 5.5.7.c; ORM OR 2.3.1)

						/X/X

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.6   <u>REACTOR COOLANT SYSTEM</u>

(Initial) Verify reactor coolant conductivity is being recorded continuously on 1H13-P678. (ORM TR 4.3.1.5)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

If the continuous conductivity recorder is INOPERABLE, notify Chemistry to perform in-line conductivity measurements at least once per 4 hours per CPS 9940.01.

8.7   <u>RESIDUAL HEAT REMOVAL</u> (MODE 3 with RPV pressure less than SDC cut-in permissive)

(Initial) N/A if <u>not</u> in MODE 3 (ITS SR 3.4.9.1)

1. Verify both shutdown cooling loops operable,
                    <u>and</u>
    2.   One shutdown cooling subsystem, or
    one recirculation pump is operating.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /
/ /	/ /	/ /	/ /	/ /	/ /	/ /

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION

8.8.1 Source Range Monitors (SRM)

SRM Comparison Guideline:

3 to 500 cps when all rods are inserted.

If a channel is > 500 cps, refer to CPS 1401.09 (or equivalent) to evaluate channel operability.

1.   MODE 3 [DAYs only]

a) Record/Verify ≥ 3.0 cps.   SRM Channel
   Use DCS Display.   A
   Verify SRMs full in.   B
      (≥ 2 channels)   C
      (ITS SR 3.3.1.2.4 T1)   D

MON	TUE	WED	THU	FRI	SAT	SUN
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps

b) (Initial) Channel Check SRM indications.
   • 1H13-P678   • DCS (flux & period)
   (ITS SR 3.3.1.2.3 T1)

MON	TUE	WED	THU	FRI	SAT	SUN
X/ /X	X/ /X	X/ /X	X/ /X	X/ /X	X/ /X	X/ /X

2.   MODE 2 w/IRM's < Range 3 [Shiftly]

a) Record/Verify ≥ 3.0 cps.   SRM Channel
   Use DCS Display.   Mids   A
   Verify SRMs full in.   Mids   B
      (≥ 3 channels)   Mids   C
      (ITS SR 3.3.1.2.4 T1) Mids   D

MON	TUE	WED	THU	FRI	SAT	SUN
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps

b) Record/Verify ≥ 3.0 cps.   SRM Channel
   Use DCS Display.   Days   A
   Verify SRMs full in.   Days   B
      (≥ 3 channels)   Days   C
      (ITS SR 3.3.1.2.4 T1) Days   D

MON	TUE	WED	THU	FRI	SAT	SUN
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps

c) Record/Verify ≥ 3.0 cps.   SRM Channel
   Use DCS Display.   Swings A
   Verify SRMs full in.   Swings B
      (≥ 3 channels)   Swings C
      (ITS SR 3.3.1.2.4 T1) Swings D

MON	TUE	WED	THU	FRI	SAT	SUN
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps
__cps	__cps	__cps	__cps	__cps	__cps	__cps

d) (Initial) Channel Check SRM indications.
   • 1H13-P678   • DCS (flux & period)
   (ITS SR 3.3.1.2.1 T1)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.2   Intermediate Range Monitors (IRM) (MODE 2)

(Initial) Channel Check IRM indications
on 1H13-P678. (ITS SR 3.3.1.1.1 T1.a)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

8.8.3   Average Power Range Monitors (APRM)

1. (Initial) Channel Check APRM
indications on 1H13-P669, P670, P671,
P672, or P678 (MODEs 1 and 2)
(ITS SR 3.3.1.1.1 T2.a, c)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

2. (Initial) Channel Check APRM Flow-Biased
Simulated Thermal Power - High using FLOW %
position on 1H13-P669, P670, P671, P672.
(MODE 1) (ITS SR 3.3.1.1.1 T2.b)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

❹

8.8.4   Oscillation Power Range Monitors (OPRM) (When ≥ 21.6% RTP)

(Initial) Verify each OPRM Module (8 total) at
1H13-P669, P670, P671 & P672 in OPERATE and
no TROUBLE/TRIP LEDs. (ITS LCO 3.3.1.3)

MON	TUE	WED	THU	FRI	SAT	SUN
						/ X / X

8.8.5   Narrow Range (NR) Reactor Vessel Water Level

1.   (Initial) Channel Check ATM indications
of Reactor Vessel Water Level (NR).

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

a) RPS/RHR ATM 1B21-N680A, B, C, D
(ITS SR 3.3.1.1.1 T4, T5,
ITS SR 3.3.6.1.1 T5.b, T5.c)

b) ADS ATM 1B21-N695A, B
(ITS SR 3.3.5.1.1 T4.d, T5.d)

c) RCIC ATM 1B21-N693A, B
(ITS SR 3.3.5.2.1 T2)

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

2. (Initial) Channel Check Feedwater Reactor Vessel Water Level
    Instruments 1C34-N004A, B, C by verifying annunciator window
    5002-2P (WTR LVL SIG FAILURE) is not alarmed.
    (MODE 1) (ORM TR 4.2.12.1)

/ /	/ /	/ /	/ /	/ /	/ /	/ /

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.6 Wide Range (WR) Reactor Vessel Water Level

(Initial) Channel Check Reactor Vessel
Water Level (WR) indications.

/ /	/ /	/ /	/ /	/ /	/ /	/ /

1.   NS4 ATM 1B21-N681A, B, C, D
(ITS SR 3.3.6.1.1 T1.a, T2.a, T4.f,
ITS SR 3.3.6.2.1 T1)

2. RCIC ATM 1B21-N692A, E, B, F
(ITS SR 3.3.5.2.1 T1,
ITS SR 3.3.6.1.1 T3.h)

3.   Div 1, LPCS ATM 1B21-N691A, E
(ITS SR 3.3.5.1.1 T1.a, T4.a,
ITS SR 3.3.6.1.1 T2.j, T5.d,
ITS SR 3.3.6.3.1 T3,
ITS SR 3.3.6.4.1 T2)

4.   Div 2, RHR ATM 1B21-N691B, F
(ITS SR 3.3.5.1.1 T2.a, T5.a,
ITS SR 3.3.6.1.1 T2.j, T5.d,
ITS SR 3.3.6.3.1 T3,
ITS SR 3.3.6.4.1 T2)

5.   Div 3, HPCS ATM 1B21-N673C, G
(ITS SR 3.3.5.1.1 T3.a, T3.c,
ITS SR 3.3.6.1.1 T2.e)

6.   Div 4, HPCS ATM 1B21-N673D, H
(ITS SR 3.3.5.1.1 T3.a, T3.c,
ITS SR 3.3.6.1.1 T2.e)

7.   ATWS RPT, level 1B21-N700A, E on 1RR04JA
(ITS SR 3.3.4.2.1 item a)

8.   ATWS RPT, level 1B21-N700B, F on 1RR04JB
(ITS SR 3.3.4.2.1 item a)

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.8 INSTRUMENTATION (cont'd)

8.8.7 Reactor Vessel Pressure

1. (Initial) Channel Check Reactor Vessel Pressure indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

a) RPS/RHR ATM 1B21-N678A, B, C, D
   (ITS SR 3.3.1.1.1 T3)

b) NS4 ATM 1B21-N679A, B, C, D
   (ITS SR 3.3.6.1.1 T5.e)

c) Div 1, LPCS ATM 1B21-N697A, E
   (ITS SR 3.3.5.1.1 T1.d)

d) Div 2, RHR ATM 1B21-N697B, F
   (ITS SR 3.3.5.1.1 T2.d)

e) ATWS RPT, 1B21-N701A, E, 1RR04JA
   (ITS SR 3.3.4.2.1 item b)

f) ATWS RPT, 1B21-N701B, F, 1RR04JB
   (ITS SR 3.3.4.2.1 item b)

2. (Record) Record/verify Reactor Steam Dome Pressure is $\leq$ 1045 psig.

(Computer point: C34NA001 preferred. List in comments section if a different computer point or instrument is used.)

(MODE 1 and 2) (ITS SR 3.4.12.1)

	MON	TUE	WED	THU	FRI	SAT	SUN
M	___psig	___psig	___psig	___psig	___psig	___psig	___psig
D	___psig	___psig	___psig	___psig	___psig	___psig	___psig
S	___psig	___psig	___psig	___psig	___psig	___psig	___psig

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.8 Drywell Pressure

1.   (Initial) Channel Check Drywell Pressure
         indications

/ /	/ /	/ /	/ /	/ /	/ /	/ /

a) RPS ATM 1C71-N650A, B, C, D
     (ITS SR 3.3.1.1.1 T7
      ITS SR 3.3.6.1.1 T2.b, T5.f
      ITS SR 3.3.6.2.1 T2)

b) Div 1, LPCS ATM 1B21-N694A, E
     (ITS SR 3.3.5.1.1 T1.b, T4.b
      ITS SR 3.3.6.1.1 T2.d, T3.j (N694A)
      ITS SR 3.3.6.1.1 T5.f
      ITS SR 3.3.6.3.1 T1
      ITS SR 3.3.6.4.1 T1)

c) Div 2, RHR ATM 1B21-N694B, F
     (ITS SR 3.3.5.1.1 T2.b, T5.b
      ITS SR 3.3.6.1.1 T2.d, T3.j (N694B)
      ITS SR 3.3.6.1.1 T5.f
      ITS SR 3.3.6.3.1 T1,
      ITS SR 3.3.6.4.1 T1)

d) Div 3, HPCS ATM 1B21-N667C, G
     (ITS SR 3.3.5.1.1 T3.b
      ITS SR 3.3.6.1.1 T2.f)

e) Div 4, HPCS ATM 1B21-N667D, H
     (ITS SR 3.3.5.1.1 T3.b
      ITS SR 3.3.6.1.1 T2.f)

2.   (Record) Div 1 LPCS ATM 1B21-N694A
         reading (Drywell Pressure).

         If unavailable, record
         either 1B21-N694B, E or F.

M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.9 Containment Pressure (RHR)

1.   (Initial) Channel Check Containment Pressure indications.

	MON	TUE	WED	THU	FRI	SAT	SUN
	/ /	/ /	/ /	/ /	/ /	/ /	/ /

a) Div 1 RHR ATM 1E12-N662A, C (ITS SR 3.3.6.3.1 T2)

b) Div 2 RHR ATM 1E12-N662B, D (ITS SR 3.3.6.3.1 T2)

c) Containment Pressure indicated on Recorder 1LR-CM030 and 1LR-CM031 on 1H13-P601. (On scale only above 5 psig, normally Downscale.)

2.   (Record)   Div 1 RHR ATM 1E12-N662 reading (Containment Pressure) or the same division as used in step 8.8.8.2

MON	TUE	WED	THU	FRI	SAT	SUN
M _____	M _____	M _____	M _____	M _____	M _____	M _____
D _____	D _____	D _____	D _____	D _____	D _____	D _____
S _____	S _____	S _____	S _____	S _____	S _____	S _____

NOTE

8.8.9.3 calculation may be performed with any of the four channels, however similar channels shall be used; for example 1B21-N694A with 1E12-N662A, 1B21-N694E with 1E12-N662C.

3.   Drywell Internal Pressure (ITS SR 3.6.5.4.1)

(Initial) Verify:

Drywell Pressure (step 8.8.8.2)
    minus
CNMT Pressure (step 8.8.9.2)

is ≥ -0.2 psid and ≤ 1.0 psid.

MON	TUE	WED	THU	FRI	SAT	SUN
M _____ psid	M _____ psid	M _____ psid	M _____ psid	M _____ psid	M _____ psid	M _____ psid
M _____ Initial	M _____ Initial	M _____ Initial	M _____ Initial	M _____ Initial	M _____ Initial	M _____ Initial
D _____ psid	D _____ psid	D _____ psid	D _____ psid	D _____ psid	D _____ psid	D _____ psid
D _____ Initial	D _____ Initial	D _____ Initial	D _____ Initial	D _____ Initial	D _____ Initial	D _____ Initial
S _____ psid	S _____ psid	S _____ psid	S _____ psid	S _____ psid	S _____ psid	S _____ psid
S _____ Initial	S _____ Initial	S _____ Initial	S _____ Initial	S _____ Initial	S _____ Initial	S _____ Initial

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.10   Scram Discharge Volume (SDV) Level (MODEs 1/2)

(Initial) Channel Check SDV Level indications.

/ /	/ /	/ /	/ /	/ /	/ /	/ /

1.   RPS ATM 1C11-N601A, B, C, D
(ITS SR 3.3.1.1.1 T8.a)

2.   RCIS ATM 1C11-N602A, B
(ORM TR 4.2.4.1 Ta)

8.8.11   Main Steam Line (MSL) Header Pressure

(Initial) Channel Check MSL Header Pressure
ATM Indications NS4 ATM 1B21-N676A, B, C, D.
(MODE 1 only) (ITS SR 3.3.6.1.1 T1.b)

/ /	/ /	/ /	/ /	/ /	/ /	/ /

8.8.12   Main Steam Line (MSL) Flow

(Initial) Channel Check MSL Flow
indications.
(ITS SR 3.3.6.1.1 T1.c)

/ /	/ /	/ /	/ /	/ /	/ /	/ /

1. NS4 ATM 1E31-N686A, B, C, D

2. NS4 ATM 1E31-N687A, B, C, D

3. NS4 ATM 1E31-N688A, B, C, D

4. NS4 ATM 1E31-N689A, B, C ,D

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.13   RCIC Storage Tank

1.   (Initial) Channel Check RCIC Storage Tank Level indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

a) ATM, 1E51-N635A, E (Instrument zero is 739' 10.75" or 2' 10.75" from tank bottom) (ITS SR 3.3.5.2.1 T3) Used for RCIC suction source switching.

b) ATM, 1E22-N654C, G (Instrument zero is 739' 10.75" or 2' 10.75" from tank bottom) (ITS SR 3.3.5.1.1 T3.d) Used for HPCS suction source switching.

2.   (Initial) Verify that RCIC storage tank available water volume is $\geq$ 125,000 gal.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

This volume is maintained when the trip Light under 1E51-N801 (1H13-P862) indicator is ON. *«LBD-4»*

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.14   Suppression Pool Level - Bottom = 712'0"

1.   (Initial) Channel Check Suppression Pool
        Level indications.

/ /	/ /	/ /	/ /	/ /	/ /	/ /

    a)   ATM 1E22-N655C, G (inst. Zero = 731' 5")
       (ITS SR 3.3.5.1.1 T3.e)

    b)   ATM 1E51-N636A, E (inst. Zero = 732' 8")
       (ITS SR 3.3.5.2.1 T4)

    c)   1LR-CM240, -CM241 or 1LY-CM030, -CM031,
    1LY-SM006 (1H13-P852), 1LY-SM013 (1H13-P862)
    (ITS SR 3.3.6.4.1 T3)

    Instrument zero is 727'0".
    1LR-CM240 & CM241 read in feet and inches.
    1LY-SM006, 1LY-SM013 read 0 - 100%,
      with full scale equal to +70".
    Use following when conducting channel check.
    (Also applicable to 1LY-CM030 & CM031.)
      0% = 15.0' (15'0")
  25% = 16.6' (16'5.5")
  50% = 17.9' (17'11")
  67% = 18.9' (18'11")
  71% = 19.2' (19'2")
  76% = 19.4' (19'5")
100% = 20.8' (20'10")

2.   (Record) [MIDs only]
    Record/Verify Suppression   CM030
    Pool Water Level from recorders
    1LR-CM030 and 1LR-CM031 on 1H13-P601
    is either: (ITS SR 3.6.2.2.1)   CM031

    a.   MODE 1/2/3 -
      19.0' (19'0") - 19.4' (19'5"); or

    b.   MODE 3 with RPV < 235 psig -
      19.0' (19'0") - 20.1' (20'1")

    If either is inoperable,
  verify level using computer points SM-BA402 and SM-BA404
(suppression pool water level - high range).

__/X/X ft	__/X/X ft	__/X/X ft	__/X/X ft	__/X/X ft	__/X/X ft	__/X/X ft
__/X/X ft	__/X/X ft	__/X/X ft	__/X/X ft	__/X/X ft	__/X/X ft	__/X/X ft

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.15   LPCS Pump Discharge Flow

(Initial) Channel Check LPCS Pump
            Discharge Flow indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

LPCS ATM 1E21-N651 (ITS SR 3.3.5.1.1 T1.e)

8.8.16   LPCS Pump Discharge Pressure

(Initial) Channel Check LPCS Pump
            Discharge Pressure indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

ADS ATM 1E21-N652, 1E21-N653
(ITS SR 3.3.5.1.1 T4.e)

8.8.17   LPCI Pump A Discharge Flow

(Initial) Channel Check LPCI Pump A
            Discharge Flow indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

RHR ATM 1E12-N652A (ITS SR 3.3.5.1.1 T1.f)

8.8.18   LPCI Pump A Discharge Pressure

(Initial) Channel Check LPCI Pump A
            Discharge Pressure indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

ADS ATM 1E12-N655A, 1E12-N656A
(ITS SR 3.3.5.1.1 T4.f)

8.8.19   LPCI Pump B Discharge Flow

(Initial) Channel Check LPCI Pump B
            Discharge Flow indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

RHR ATM 1E12-N652B (ITS SR 3.3.5.1.1 T2.e)

8.8.20   LPCI Pump C Discharge Flow

(Initial) Channel Check LPCI Pump C
            Discharge Flow indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

RHR ATM 1E12-N652C (ITS SR 3.3.5.1.1 T2.e)

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.21   LPCI Pump (B and C) Discharge Pressure

(Initial) Channel Check LPCI Pump B & C
        Discharge Pressure indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

1.   ADS ATM 1E12-N655B, 1E12-N656B
      (ITS SR 3.3.5.1.1 T5.e)

2.   ADS ATM 1E12-N655C, 1E12-N656C
      (ITS SR 3.3.5.1.1 T5.e)

8.8.22   HPCS Pump Discharge Pressure

(Initial) Channel Check HPCS Pump
        Discharge Pressure indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

HPCS ATM 1E22-N651 (ITS SR 3.3.5.1.1 T3.f)

8.8.23   HPCS Pump Minimum Flow

(Initial) Channel Check HPCS Pump
        Minimum Flow indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

HPCS ATM 1E22-N656 (ITS SR 3.3.5.1.1 T3.g)

8.8.24   RCIC Steam Line Flow

(Initial) Channel Check RCIC Steam Line
        Flow indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 14% of full scale

ATM 1E31-N683A, B (ITS SR 3.3.6.1.1 T3.a)

8.8.25   RCIC Steam Line Supply Pressure

(Initial) Channel Check RCIC Steam Line
        Pressure indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

ATM 1E31-N685A, B
Normally overranged high due to high pressure. (ITS SR 3.3.6.1.1
T3.c)

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.26   RCIC Turbine Exhaust Diaphragm Pressure

(Initial) Channel Check RCIC Turbine
    Exhaust Pressure indications.

/ /	/ /	/ /	/ /	/ /	/ /	/ /

Div 1, ATM Indication of RCIC Turbine Exhaust Diaphragm
Pressure,
1E51-N655A, E, B, F. (ITS SR 3.3.6.1.1 T3.d)

8.8.27   RHR/RCIC Steam Line Flow

(Initial) Channel Check
RHR/RCIC
    Steam Line Flow indications.

/ /	/ /	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 14% of full scale

ATM 1E31-N684A, B (ITS SR 3.3.6.1.1 T3.i)

8.8.28   Condenser Vacuum - Required in:

a) MODE 1, or

b) MODE 2 or 3 with any TSV not closed.

(Initial) Channel Check
Condenser Vacuum
    indications.

/ /	/ /	/ /	/ /	/ /	/ /	/ /

NS4 ATM 1B21-N675A, B, C, D
(ITS SR 3.3.6.1.1 T1.d)

8.8.29   Main Steam Line (MSL) Radiation

(Initial) Channel Check MSL
Radiation Level
    indications.

/ /	/ /	/ /	/ /	/ /	/ /	/ /

1H13-P669, P672
(ORM TR 4.2.16.1 Ta, Tb)

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.8   INSTRUMENTATION (cont'd)

8.8.30   Main Steam Line (MSL) Tunnel Temperature

(Initial) Channel Check MSL Tunnel
Temperature indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 18°F

1E31-N604A, B, C, D, E, F on
1H13-P632, P642, P671, P672
(ITS SR 3.3.6.1.1 T1.e, T3.f, T4.e)

If any of the listed instruments indicates
> 140°F, contact NSED for evaluation.

8.8.31   Main Steam Line (MSL) Turbine Building Temp

(Initial) Channel Check MSL Turbine
Building Temperature indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 16°F

Channel A: 1E31-N559A, B, C, D
Channel B: 1E31-N560A, B, C, D
Channel C: 1E31-N561A, B, C, D
Channel D: 1E31-N562A, B, C, D
Channel E: 1E31-N563A, B, C, D
(ITS SR 3.3.6.1.1 T1.f)

Div A: 1H13-P861/862, Div B: 1H13-P851/852,
Div C: 1H13-P821/822, Div D: 1H13-P672

8.8.32   Reactor Water Cleanup (RWCU) System Isolation Delta Flow

(Initial) Channel Check
RWCU Delta Flow
indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

1E31-R614A, B on 1H13-P632, P642
(ITS SR 3.3.6.1.1 T4.a)

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

MON	TUE	WED	THU	FRI	SAT	SUN

8.8   <u>INSTRUMENTATION</u> (cont'd)

<u>NOTE</u>

Only place one set of divisional LD Bypass Switches into BYPASS at a time when obtaining channel check data.
Ensure applicable ITS/ORM impact of LD Bypass Switch in BYPASS has been reviewed.

8.8.33   <u>Leak Detection System Isolations</u>
<u>using Bypass Switches</u>

1.   (Initial) Bypass Div 1 (2)
<u>RWCU,</u>   <u>Div 1:</u>
RCIC and RHR Leak Detection using
bypass switches on 1H13-P632 (P642). <u>Div 2:</u>

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /
/ /	/ /	/ /	/ /	/ /	/ /	/ /

2.   <u>RWCU Sys Isol - Equipment Area Temperatures</u>
(A & E - 1H13-P632, B & F - 1H13-P642)

   a) (Initial) Channel Check RWCU Pump Room 1
       Temperature indications.

    <u>Comparison Guideline:</u> 20°F

    1E31-N621A, B (ITS SR 3.3.6.1.1 T4.d)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

   b) (Initial) Channel Check RWCU Pump Room 2
       Temperature indications.

    <u>Comparison Guideline:</u> 20°F

    1E31-N622A, B (ITS SR 3.3.6.1.1 T4.d)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

   c) (Initial) Channel Check RWCU Pump Room 3
       Temperature indications.

    <u>Comparison Guideline:</u> 25°F

    1E31-N621E, F (ITS SR 3.3.6.1.1 T4.d)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

   d) (Initial) Channel Check RWCU HX Room A
       Temperature indications.

    <u>Comparison Guideline:</u> 25°F

    1E31-N620A, B (ITS SR 3.3.6.1.1 T4.c)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

   e) (Initial) Channel Check RWCU HX Room B
       Temperature indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

Comparison Guideline: 25°F

1E31-N626A, B (ITS SR 3.3.6.1.1 T4.c)

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

8.8   INSTRUMENTATION (cont'd)

8.8.33   Leak Detection System Isolations
using Bypass Switches (cont'd)

	MON	TUE	WED	THU	FRI	SAT	SUN

3.   RCIC Sys Isol - RCIC Equip Room Ambient Temp

(Initial) Channel Check RCIC Equipment Room Ambient Temperature indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 23°F

1E31-N602A, B (ITS SR 3.3.6.1.1 T3.e)

4.   RHR Sys Isol - RHR HX Rooms A & B Ambient Temp (A & E - 1H13-P632, B & F - 1H13-P642)

a) (Initial) Channel Check RHR HX Room A Ambient Temp indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 18°F

1E31-N608A, B (ITS SR 3.3.6.1.1 T5.a)

b) (Initial) Channel Check RHR HX Room B Ambient Temp indications.

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 18°F

1E31-N610A, B (ITS SR 3.3.6.1.1 T5.a)

5.   (Initial) Return Div 1 (2) RWCU,   Div 1:
RCIC and RHR Leak Detection (LD)
bypass switches to NORMAL.   Div 2:

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /
/ /	/ /	/ /	/ /	/ /	/ /	/ /

6.   (Initial) *Independently*
Verify   Div 1: **IV**
Div 1 (2) RWCU, RCIC and RHR LD
bypass switches are in NORMAL.   Div 2: **IV**

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /
/ /	/ /	/ /	/ /	/ /	/ /	/ /

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

MON	TUE	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE

NOTE

CPS 4001.01, Reactor Coolant Leakage shall be entered if any of the following leakage rates are observed:

- *Any ITS LCO 3.4.5 RCS Operational LEAKAGE limitation is exceeded.*
- *Unidentified LEAKAGE increase of ≥ 0.5 gpm in a 4 hour period (1.0 gpm in 8 hours).*
- *Unidentified LEAKAGE exceeds 2.5 gpm.*

1.   (Record)   <u>Flow Readings From 1H13-P855</u>
            (at ≈ 8 hour intervals)

a)   Time readings taken

M						
D						
S						

b)   DW FLR FLOW FROM SUMP TOTAL
      (ITS LCO 3.4.5 (a))   M
      *If the Sump (bubblier level) Flow Detector totalizer in
      step 8.9.1.b is not functioning, use alternate Pump*   D
      *(magnetic motor) Flow Detector totalizer data in step
      8.9.1.c for unidentified leakage calculations.*   S

c)   DW FLR FLOW PMP DISCH TOTAL
      (ITS LCO 3.4.5 (a))   M

                                        D

                                        S

d)   DW EQUIP FLOW
      (ITS LCO 3.4.5 (a))   M
      *If DW Equip Flow Totalizer is not functioning,
      a Manual Determination of DW RE In-Leakage*   D
      *Flow Rate shall be performed using methodology
      described in CPS 3315.02, Leak Detection (LD)*   S
      and recorded in step 8.9.4.g.1.

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE (cont'd)

2.   DW Floor Drain Sump Flow Rate Verifications (at ≈ 8 hour intervals)

a)   Check instrument used:

If the preferred
DW FLR DRN (SUMP) FLOW,
LOW RANGE 1E31-R552, Channel 1
is not functioning, use the alternate
DW FLR DRN (PUMP) FLOW,
LOW RANGE, 1E31-R551, Channel 1.

MON	TUE	WED	THU	FRI	SAT	SUN
SUMP	SUMP	SUMP	SUMP	SUMP	SUMP	SUMP
PUMP	PUMP	PUMP	PUMP	PUMP	PUMP	PUMP

b)   (Record - Monday only) Enter the
DW FLR DRN FLOW, LOW RANGE values   M
from Sunday. (From step 8.9.2.c)
                                        D

                                        S

c)   (Record) Enter the
DW FLR DRN (SUMP) FLOW, LOW RANGE   M
1E31-R552, Channel 1,
        or alternate   D
DW FLR DRN (PUMP) FLOW, LOW RANGE
1E31-R551, Channel 1.   S

d)   (Initial) (MODE 1)
Verify current DW Floor Drain/   M
flow rate is ≤ 2 gpm above any
reading of the previous 24 hours.   D
(ITS SR 3.4.5.1)
                                        S

e)   (Initial) Verify ≤ 5 gpm on
DW FLR DRN (SUMP) FLOW, LOW RANGE   M
1E31-R552 Channel 1
        or alternate   D
DW FLR DRN (PUMP) FLOW, LOW RANGE
1E31-R551, Channel 1. (ITS SR 3.4.5.1) S

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

MON	TUE	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE (cont'd)

3.   Unidentified Leakage Calculation using Flow Totalizer

a)   Check instrument used:

If the preferred DW FLR DRN (SUMP) FLOW, LOW RANGE 1E31-R552, Channel 1 is not functioning, use the alternate DW FLR DRN (PUMP) FLOW, LOW RANGE, 1E31-R551, Channel 1.

	MON	TUE	WED	THU	FRI	SAT	SUN
	SUMP	SUMP	SUMP	SUMP	SUMP	SUMP	SUMP
	PUMP	PUMP	PUMP	PUMP	PUMP	PUMP	PUMP

b)   (Record) The current value of DW FLR FLOW SUMP TOTAL from step 8.9.1.b or alternate DW FLR FLOW PMP DISCH TOTAL from step 8.9.1.c.

c)   (Record) The value of DW FLR SUMP FLOW taken ≈ 24 hours before (DW FLR FLOW PMP DISCH TOTAL, alternate)

Sunday's value: _____

d)   (Record) The total number of gallons by subtracting c) from b).

e)   (Record) The number of minutes since reading in item c).

f)   (Record) Flow rate since last reading: Reading from d) divided by elapsed time e).

		MON	TUE	WED	THU	FRI	SAT	SUN
M	b)	_____	_____	_____	_____	_____	_____	_____
	c)	_____	_____	_____	_____	_____	_____	_____
	d)	_____	_____	_____	_____	_____	_____	_____
	e)	_____	_____	_____	_____	_____	_____	_____
	f)	_____	_____	_____	_____	_____	_____	_____
D	b)	_____	_____	_____	_____	_____	_____	_____
	c)	_____	_____	_____	_____	_____	_____	_____
	d)	_____	_____	_____	_____	_____	_____	_____
	e)	_____	_____	_____	_____	_____	_____	_____
	f)	_____	_____	_____	_____	_____	_____	_____
S	b)	_____	_____	_____	_____	_____	_____	_____
	c)	_____	_____	_____	_____	_____	_____	_____
	d)	_____	_____	_____	_____	_____	_____	_____
	e)	_____	_____	_____	_____	_____	_____	_____
	f)	_____	_____	_____	_____	_____	_____	_____

g)   (Record) Enter the   M
DW FLR DRN (SUMP) FLOW, LOW RANGE   D
from recorder 1E31-R552, Channel 1.   S

h)   (Record) Enter the   M
DW FLR DRN (PUMP) FLOW, LOW RANGE   D
from recorder 1E31-R551, Channel 1.   S

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE (cont'd)

3.   Unidentified Leakage Calculation using Flow Totalizer (cont'd)

i) (Initial) Perform Channel Check of the calculated DW Floor Drain Sump flow rate (Step f above) and DW FLOOR DRAIN (SUMP) and (PUMP) FLOW rates (g and h above).

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 1.4 gpm

If MODE of operation of Sump Pumps (auto/manual) is changed, then at least 2 pump out cycles must occur before a reliable Channel Check can be performed.

4. Identified Leakage Calculation

a) (Record) DW EQUIP FLOW TOTAL from step 8.9.1.d

b) (Record) The value of DW EQUIP FLOW TOTAL taken ≈ 24 hours before.

Sunday's value: _____

c) (Record) The total number of gallons by subtracting b) from a).

d) (Record) Elapsed time in minutes between the current reading and reading in item b).

e) (Record) Divide the inlet flow from

step c), by the elapsed time from step d) to determine an IDENTIFIED LEAKAGE rate averaged over a 24 hour period.

f) (Record) DW EQUIP DRN FLOW, 1E31-R552, Pen 3 on 1H13-P855.

M
a) _____ _____ _____ _____ _____ _____ _____
b) _____ _____ _____ _____ _____ _____ _____
c) _____ _____ _____ _____ _____ _____ _____
d) _____ _____ _____ _____ _____ _____ _____
e) _____ _____ _____ _____ _____ _____ _____
f) _____ _____ _____ _____ _____ _____ _____

D
a) _____ _____ _____ _____ _____ _____ _____
b) _____ _____ _____ _____ _____ _____ _____
c) _____ _____ _____ _____ _____ _____ _____
d) _____ _____ _____ _____ _____ _____ _____
e) _____ _____ _____ _____ _____ _____ _____
f) _____ _____ _____ _____ _____ _____ _____

S
a) _____ _____ _____ _____ _____ _____ _____
b) _____ _____ _____ _____ _____ _____ _____
c) _____ _____ _____ _____ _____ _____ _____
d) _____ _____ _____ _____ _____ _____ _____
e) _____ _____ _____ _____ _____ _____ _____
f) _____ _____ _____ _____ _____ _____ _____

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE (cont'd)

4.   Identified Leakage Calculation (cont'd)

g)   CPS 3315.02 (LD) Manual Identified Leakage
Calculation
(N/A if the DW Equip Flow
Totalizer is functioning.)

1)   (Record) DW RE In-Leakage Flow
Rate using Manual Determination.

2)   (Initial) Attach spreadsheet or manual
calculations used.

CPS 3315.02 (LD) Manual
Determination of DW RE In-Leakage
Flow Rate will not be a 24 hour average. The value
obtained will be an average leak rate occurring during
the fill time and will be a more conservative value.

M							
1)	_____	_____	_____	_____	_____	_____	_____
2)	_____	_____	_____	_____	_____	_____	_____
D							
1)	_____	_____	_____	_____	_____	_____	_____
2)	_____	_____	_____	_____	_____	_____	_____
S							
1)	_____	_____	_____	_____	_____	_____	_____
2)	_____	_____	_____	_____	_____	_____	_____

5.   Total leakage averaged over
previous 24 hour period ≤ 30 gpm

a)   (Record) Add average identified leakage from step
8.9.4.e, or 8.9.4.g.1 to average unidentified leakage
from step 8.9.3.f.

b)   (Initial)
Verify total leakage ≤ 30 gpm.
(ITS SR 3.4.5.1)

M							
a)	_____	_____	_____	_____	_____	_____	_____
b)	_____	_____	_____	_____	_____	_____	_____
D							
a)	_____	_____	_____	_____	_____	_____	_____
b)	_____	_____	_____	_____	_____	_____	_____
S							
a)	_____	_____	_____	_____	_____	_____	_____
b)	_____	_____	_____	_____	_____	_____	_____

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.9   <u>REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE</u> (cont'd)

6.   <u>Drywell Atmosphere Particulate and</u>
<u>Gaseous Monitoring Systems</u>

    (Initial) Perform Channel Check Drywell Atmosphere
Particulate and Gaseous Monitoring Systems on 1H13-P632.

/ /	/ /	/ /	/ /	/ /	/ /	/ /

1E31-K610: Particulate (ITS SR 3.4.7.1 (b))
1E31-K611: Iodine   (Non-Tech Spec)
1E31-K612: Noble Gas   (ITS SR 3.4.7.1 (b))

7.   <u>Drywell Coolers Condensate Flow</u>

a)   (Record) Drywell Coolers Condensate flow, 1E31-R600A on
    1H13-P632.   M
  (ITS LCO 3.4.7 (c))
              D
              S

b)   (Record) Drywell Coolers Condensate flow, 1E31-R609 on
    1H13-P642.   M
  (ITS LCO 3.4.7 (c))
              D
              S

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.10 RADIOACTIVE LIQUID EFFLUENT MONITORING
INSTRUMENTATION - TANK LEVEL INDICATIONS
(during liquid additions to associated tank)

a)   (Initial) Channel Check the Cycled
Condensate Storage Tank Level on 1H13-P870.
(ODCM SR 2.7.1.1 T4.a: CK)

/ /	/ /	/ /	/ /	/ /	/ /	/ /

b)   (Initial) Channel Check the Reactor Core Isolation
Cooling Tank Level on 1H13-P862. (ODCM SR 2.7.1.1 T4.b:
CK)

/ /	/ /	/ /	/ /	/ /	/ /	/ /

8.11 MAIN CONDENSER OFF-GAS HYDROGEN CONCENTRATION (when SJAE in use)

(Initial) Verify hydrogen concentration in
the main condenser off-gas treatment system
is ≤ 4% by volume and that H_2 concentration is continuously
recorded.
(ORM TR 4.4.5)(ITS 5.5.8.a)

/ /	/ /	/ /	/ /	/ /	/ /	/ /

8.12 GASEOUS RADWASTE (OFF-GAS TREATMENT) (when SJAE in use)

(Initial) Off-Gas charcoal adsorbers are in the TREAT MODE of
operation. (ODCM SR 3.6.1.1)

/ /	/ /	/ /	/ /	/ /	/ /	/ /

8.13 THERMAL OVERLOAD PROTECTION (MOV Test Switches)

(Initial) Once per eight hour period, verify thermal overload
protection is bypassed for motor operated valves (MOV) required to
be operable. Verify MOV Test Prep switches are in NORM position.
(ORM TR 4.5.2.2) *«CM-1»*

/ /	/ /	/ /	/ /	/ /	/ /	/ /

8.14 SELF TEST SYSTEM (ITS SR {see 2.1.7})(ORM TR 4.2.14.1)

(Initial) Status indications of the STS shall be
obtained at least once per 24 hours, whenever the STS
is operating in the fully or partially automatic MODE.
- N/A the MODE not being credited for ITS/ORM.
- STS Summary print-out per CPS 3513.01 (STS).

1. Fully Automatic MODE, or

2. Partially Automatic MODE with all required tests performed once
per 7 days. (i.e., Fully Auto MODE SAT or CPS 9030.05: PMRQ
159560-01.)

/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

8.15 REACTIVITY CONTROL [MIDs only]

	MON	TUE	WED	THU	FRI	SAT	SUN
1. (MODEs 1 or 2 - Initial) Determine position of each Control Rod using an official 3D Monitor Case (preferred) or an OD-7 printout. Attach 3D Case or OD-7 printout to this log. (ITS SR 3.1.3.1)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
2. (MODE 1 or 2 with ≤ 16.7% RTP, or N/A) Verify all OPERABLE Control Rods comply with BPWS. (ITS SR 3.1.6.1)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
3. SLC Tank Volume (MODEs 1, 2, & 3: ITS SR 3.1.7.1)	[Mids]	[Mids]	[Mids]	[Mids]	[Mids]	[Mids]	[Mids]
a) (Record) SLC Storage Tank level on L1-1C41-R601 at 1H13-P601.	_____ gal	_____ gal	_____ gal	_____ gal	_____ gal	_____ gal	_____ gal
b) (Record) Sodium Pentaborate Solution concentration, percent by weight. (Daily from current CPS 9915.01)	_____ %	_____ %	_____ %	_____ %	_____ %	_____ %	_____ %
c) (Initial) Using 8.16.3.a/b data, verify available volume of sodium pentaborate solution is within the limits of ITS Figure 3.1.7-1.	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X

❸

- Adverse trending toward 13.4% or 4300 gal, data point nearing 150 gal of the Min Req Conc Line, or > 100 gal vol change should be promptly investigated **and** an SLC Tank sample obtained per CPS 9915.01 [Chemistry perform].

8.16 NSS AND BOP ANNUNCIATOR HIDDEN GROUND FAULT TEST [Wednesday MIDs only]

NOTE

If an annunciator card(s) has a hidden ground fault in the system being tested, it will alarm.

1. (Initial) Perform a NSS Hidden Ground Fault Test.			/X/X				

In 1H13-P630, depress Ground Fault Test push-button and observe the Ground Fault lamp lights and verify annunciator "H13-P630 ANNUNCIATOR GRD FAULT" (5006-1L) alarms, then release push-button.

2. (Initial) Perform a BOP Hidden Ground Fault Test.			/X/X				

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

In 1H13-P850, depress Ground Fault Test push-button and observe the Ground Fault lamp lights and verify annunciator "H13-P850 ANNUNCIATOR GRD FAULT" (5007-1D) alarms, then release push-button.

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.17 SUPPRESSION POOL TEMPERATURE [MIDs only]

1. (Record) Record Suppression Pool Temp from recorder 1TR-CM017 on 1H13-P638.

	MON	TUE	WED	THU	FRI	SAT	SUN
a) Supp Pool Temp 1TY-CM001 (Point 1)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
b) Supp Pool Temp 1TY-CM003 (Point 2)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
c) Supp Pool Temp 1TY-CM005 (Point 3)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
d) Supp Pool Temp 1TY-CM007 (Point 4)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
e) Supp Pool Temp 1TY-CM009 (Point 5)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
f) Supp Pool Temp 1TY-CM011 (Point 6)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
g) Supp Pool Temp 1TY-CM013 (Point 7)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
h) Supp Pool Temp 1TY-CM015 (Point 8)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X

2. (Record) Record Suppression Pool Temp from recorder 1TR-CM018 on 1H13-P639.

	MON	TUE	WED	THU	FRI	SAT	SUN
a) Supp Pool Temp 1TY-CM002 (Point 1)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
b) Supp Pool Temp 1TY-CM004 (Point 2)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
c) Supp Pool Temp 1TY-CM006 (Point 3)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
d) Supp Pool Temp 1TY-CM008 (Point 4)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
e) Supp Pool Temp 1TY-CM010 (Point 5)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
f) Supp Pool Temp 1TY-CM012 (Point 6)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
g) Supp Pool Temp 1TY-CM014 (Point 7)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
h) Supp Pool Temp 1TY-CM016 (Point 8)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X

3. (Initial) Verify 16 channels, 2 in each sector are operable by performing a Channel Check of Suppression Pool Temp Indications. (ORM TR 4.2.15.1)

	MON	TUE	WED	THU	FRI	SAT	SUN
	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X

4. (Record) (ITS SR 3.6.2.1.1)

If all 8.18.1/2 data points are ≤ 95°F, enter the highest recorded data value.

Or

If any 8.18.1/2 data point is > 95°F, calculate the arithmetical average of the temperatures recorded. Verify ≤ 95°F.

	MON	TUE	WED	THU	FRI	SAT	SUN
	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X

If testing is in progress that adds heat to the suppression pool, initiate CPS 9000.05, Suppression Pool Temperature Log.

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.18 DRYWELL POST-LOCA VACUUM RELIEF VALVES [Monday MIDs only]

(Initial) Verify the following 1HG010A
Drywell Post-LOCA Relief Valves 1HG011A
are closed. (ITS SR 3.6.5.6.1) 1HG010B
        1HG011B
        1HG010C
        1HG011C
        1HG010D
        1HG011D

MON column:
__/X/X
__/X/X
__/X/X
__/X/X
__/X/X
__/X/X
__/X/X
__/X/X

8.19 SECONDARY CONTAINMENT INTEGRITY [MIDs only]

❹ (Record) Record/Verify Secondary
Containment to Atmosphere D/P is ≥ 0.25
inch of vacuum water gauge from:
  Secondary CNMT DP [Div 1 - 5050 (0PDI-VG001)]
       or
  Secondary CNMT DP [Div 2 - 5052 (0PDI-VG101)]
(ITS SR 3.6.4.1.1) Refer to 2.1.8.

MON	TUE	WED	THU	FRI	SAT	SUN
__/X/X in. vac WG	__/X/X in. vac WG	__/X/X in. vac WG	__/X/X in. vac WG	__/X/X in. vac WG	__/X/X in. vac WG	__/X/X in. vac WG

8.20 CONTAINMENT PRESSURE (when associated PCIV's {Group 9 valves: 1VR002A/2B, 1VQ006A/6B} are not closed)

(Initial) Channel Check Containment
Pressure - High Permissive/Trip Function.
(ITS SR 3.3.6.1.1 T2.k)

MON	TUE	WED	THU	FRI	SAT	SUN
/ /	/ /	/ /	/ /	/ /	/ /	/ /

- < 3.0 psid (Pri/Sec CNMT dP)
- HI CNMT PRESS white indicating lights (above 1VG01YA/1VG01B switches) are OFF {setpoint is 2.56 psid}

8.21 RADIATION MONITORING INSTRUMENTATION (when SJAE in use) [MIDs only]

(Initial) Channel Check Post-Treatment Off-Gas PRM - Effluent Sys
Flow-Rate Measurement Device 1N66-R620 on 1H13-P845. (ODCM
SR 3.9.1.1 T2.b)

MON	TUE	WED	THU	FRI	SAT	SUN
/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X

8.22 MAIN CONDENSER OFF-GAS TREATMENT SYSTEM EXPLOSIVE GAS MONITORING (when SJAE in use) [MIDs only]

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

(Initial) Channel Check the Gaseous Radwaste - Hydrogen Monitor 1N66-R605 on 1H13-P845. (ORM TR 4.2.11.1)	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.23 **RECIRCULATION PUMP SEALS** [SWINGs only] **[CPS 3302.01 (RR) Steady State 100% Power Table 1 ABNORMAL Values]**

1. (Record) Record the following Recirc Pump A (B) parameters from 1B33-R601 on 1H13-P614.

❶ a) Pump A (B) #2 Seal Cavity [T3] - Point 8 (20) [≥ 180ºF (Alarm); ≥ 5ºF/day rise; ≥ 27ºF above T1]

A: ___	A: ___	A: ___	A: ___	A: ___	A: ___	A: ___
B: ___	B: ___	B: ___	B: ___	B: ___	B: ___	B: ___

  b) Pump A (B) #1 Seal Cavity [T1] - Point 9 (21) [≥ 180ºF (Alarm); ≥ 4ºF/day rise]

A: ___	A: ___	A: ___	A: ___	A: ___	A: ___	A: ___
B: ___	B: ___	B: ___	B: ___	B: ___	B: ___	B: ___

  c) Pump A (B) #2 Seal Cooler Water Disch - Point 10 (22) **[≥ 146ºF (Alarm); ≥ 4ºF/day rise]**

A: ___	A: ___	A: ___	A: ___	A: ___	A: ___	A: ___
B: ___	B: ___	B: ___	B: ___	B: ___	B: ___	B: ___

2. (Record) Record the following Recirc Pump A (B) parameters from DCS on 1H13-P680.

  a) Pump A (B) #1 Seal Press [P1] **[≥ 1200 psig]**

A: ___	A: ___	A: ___	A: ___	A: ___	A: ___	A: ___
B: ___	B: ___	B: ___	B: ___	B: ___	B: ___	B: ___

  b) Pump A (B) #2 Seal Press [P2] [Low: ≤ 408 psig; High: ≥ 612 psig]

A: ___	A: ___	A: ___	A: ___	A: ___	A: ___	A: ___
B: ___	B: ___	B: ___	B: ___	B: ___	B: ___	B: ___

❹

8.24 **RECIRCULATION LOOP FLOW** (MODEs 1 and 2) [SWINGs only]

1. (Record) Record total core flow. Comp Pt B33DA024, TOTAL RX JET PUMP FLOW.

___ mlbm/hr	___ mlbm/hr	___ mlbm/hr	___ mlbm/hr	___ mlbm/hr	___ mlbm/hr	___ mlbm/hr

2. (Initial) Verify RR loop flow mismatch is within following limits. (ITS SR 3.4.1.1)

X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/

  a) Determine recirculation loop flows by obtaining the jet pump flows for each of the two loops from Computer Pts B33DA022 (Loop A) & B33DA023 (Loop B).

  b) Verify the mismatch is either: 1) ≤ 10% of rated core flow (8.45 x 10⁶ lbm/hr) when operating at < 70% of rated core flow, or 2) ≤ 5% of rated core flow (4.225 x 10⁶ lbm/hr) when operating at ≥ 70% of rated core flow.

❿ 3. (Initial) During single loop mode, verify ≤ 58% RTP every 24 hours. (ITS LCO 3.4.1)

X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.25 SVC PROTECTION SYSTEMS [MIDs only]

Verify required AutoLog E-Area Daily Rounds - SVC local panel checks are complete.
(ITS SR 3.8.11.1)

	MON	TUE	WED	THU	FRI	SAT	SUN
1. (Initial) RAT SVC Protection System	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X
2. (Initial) ERAT SVC Protection System	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X	/X/X

8.26 CONTAINMENT AVERAGE AIR TEMPERATURE [SWINGs only]

	MON	TUE	WED	THU	FRI	SAT	SUN
1. (Record) Record Primary Containment Bulk Temperature							
a) Div 1 from 1PR-CM256 on 1H13-P601.	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
b) Div 2 from 1PR-CM257 on 1H13-P601.	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
2. (Record) Calculate arithmetical average of the 2 temperatures recorded in 8.26.1.	_____	_____	_____	_____	_____	_____	_____
3. (Initial) Verify Containment Average Air Temperature ≤ 115°F. (ITS SR 3.6.1.5.1)	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/

If temperature limit is exceeded,
refer to 9000.01 8.2 for guidance. *«CM-3»*

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.27 DRYWELL AVERAGE AIR TEMPERATURE [SWINGs only]

1. (Record) Record Drywell Return Air/Area Temperatures from 1H13-P801.

Individual Temp Limit °F ↘

				MON	TUE	WED	THU	FRI	SAT	SUN
a)	DW Sply Fan A	1TE-VP033A	150°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
b)	DW Sply Fan C	1TE-VP033B	140°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
c)	Lower DW	1TE-VP033C	135°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
d)	Upper DW	1TE-VP033D	140°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
e)	DW Head	1TE-VP033E	140°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
f)	CRD Area	1TE-VP033F	135°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
g)	RPV Annulus	1TE-VP033G	150°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
h)	DW Sply Fan B	1TE-VP034A	150°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
i)	DW Sply Fan D	1TE-VP034B	140°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
j)	Lower DW	1TE-VP034C	135°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
k)	Upper DW	1TE-VP034D	140°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
l) DW Head 1TE-VP034E 230° • If bounding limit of 230°F is reached, then EQ should be notified to perform an EQ evaluation.				X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
m)	CRD Area	1TE-VP034F	135°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
n)	RPV Annulus	1TE-VP034G	150°	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/
2. (Record) Calculate arithmetical average of the 14 temperatures recorded in 8.27.1.				_____	_____	_____	_____	_____	_____	_____
3. (Initial) Verify Drywell Average Air Temperature ≤ 146.53°F. (ITS SR 3.6.5.5.1)				X/X/	X/X/	X/X/	X/X/	X/X/	X/X/	X/X/

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

If the average or any individual temperature limit is exceeded,
refer to CPS 9000.01 - 8.2 for guidance. *«CM-3»*

The arithmetical average of the DW temperature readings shall consist of at least one reading from each pair of detectors
(all available readings shall be used).

Pairs of detectors, based on elevation are as follows:
(1TE-VP033A, 1TE-VP034A); (1TE-VP033B, 1TE-VP034B); (1TE-VP033C, 1TE-VP034C);
(1TE-VP033D, 1TE-VP034D); (1TE-VP033E, 1TE-VP034E); (1TE-VP033F, 1TE-VP034F);
(1TE-VP033G, 1TE-VP034G)

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

8.28 AR/PR RADIATION MONITORS CHANNEL CHECKS

☞ Code Table for 8.28 items on Page 35.

(Initial) Verify Channel Check of AR/PR
Channels on an AR/PR LAN Terminal.

	MON	TUE	WED	THU	FRI	SAT	SUN
1. 1RIX-PR001A, B, C, D (ITS SR 3.3.6.1.1 T2.h (g)(h)(j) ITS SR 3.3.6.2.1 T4 (g)(h)(j))	/ /	/ /	/ /	/ /	/ /	/ /	/ /
2. 1RIX-PR008A, B, C, D (ITS SR 3.3.6.1.1 T2.g (g)(h) ITS SR 3.3.6.2.1 T3 (g)(h))	/ /	/ /	/ /	/ /	/ /	/ /	/ /
3. 1RIX-PR042A, B, C, D (ITS SR 3.3.6.1.1 T2.i (g)(h)(j) ITS SR 3.3.6.2.1 T5 (g)(h)(j))	/ /	/ /	/ /	/ /	/ /	/ /	/ /
4. 1RIX-AR013 [Sunday DAYs only]							X/ /X
5. 1RIX-AR010 [Sunday DAYs only]							X/ /X
6. 0UIX-PR050 1/2/4/5/7 [ORM TR 4.2.8.1 (a)]†	/ /	/ /	/ /	/ /	/ /	/ /	/ /
7. 1RIX-PR004 [ODCM SR 2.7.1.1 T2.c (d)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
8. 1RIX-PR005 [ODCM SR 2.7.1.1 T2.c (d)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
9. 1RIX-PR036 [ODCM SR 2.7.1.1 T2.a (d)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
10. 1RIX-PR037 [ODCM SR 2.7.1.1 T2.a (d)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
11. 1RIX-PR038 [ODCM SR 2.7.1.1 T2.b (d)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
12. 1RIX-PR039 [ODCM SR 2.7.1.1 T2.b (d)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

8.28   AR/PR RADIATION MONITORS CHANNEL CHECKS (cont'd)

☞ Code Table for 8.28 items on Page 35.

	MON	TUE	WED	THU	FRI	SAT	SUN
13. 1RIX-PR023 1/3/5/6 [Sunday DAYs only]							X/ /X
14. 1RIX-AR001 [Sunday DAYs only]							X/ /X
15. 1RIX-AR002 [Sunday DAYs only]							X/ /X
16. 1RIX-AR012 [Sunday DAYs only]							X/ /X
17. 1RIX-PR019 1/3/5/6							X/ /X
18. 1RIX-PR006A, B, C, D [ITS SR 3.3.6.2.1 T6 (i)(j)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
19. 1RIX-AR019 [ORM TR 4.2.6.1 Ta (e)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
20. 1RIX-AR052 [ORM TR 4.2.6.1 Ta (e)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
21. 1RIX-AR016 [ORM TR 4.2.6.1 Tb (f)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
22. 0RIX-PR001 1/3/5/7/15 [ODCM SR 3.9.2.1 T1 (a)] (also verify Ch 14 not deleted - supports Ch 15) (Ch 15 is INOP when flow < 45 LPM)	/ /	/ /	/ /	/ /	/ /	/ /	/ /
23. 0RIX-PR002 1/3/5/7/15 [ODCM SR 3.9.2.1 T1 (a)] (also verify Ch 14 not deleted - supports Ch 15) (Ch 15 is INOP when flow < 45 LPM)	/ /	/ /	/ /	/ /	/ /	/ /	/ /
24. 0RIX-PR003 1/4/6/9/15 [ODCM SR 3.9.2.1 T2 (b)] (also verify Ch 14 not deleted - supports Ch 15) (Ch 15 is INOP when flow < 45 LPM)	/ /	/ /	/ /	/ /	/ /	/ /	/ /
25. 0RIX-PR004 1/4/6/9/15 [ODCM SR 3.9.2.1 T2 (b)] (also verify Ch 14 not deleted - supports Ch 15) (Ch 15 is INOP when flow < 45 LPM)	/ /	/ /	/ /	/ /	/ /	/ /	/ /
26. 0RIX-PR008 3/4 [ODCM SR 3.9.2.1 T4 (b)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
27. 0RIX-PR012 3/4 [ODCM SR 3.9.2.1 T3 (b)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.28   AR/PR RADIATION MONITORS CHANNEL CHECKS (cont'd)

☞ Code Table for 8.28 items on Page 35.

#	Item	MON	TUE	WED	THU	FRI	SAT	SUN
28.	0UIX-PR051 1/6 [ODCM SR 3.9.2.1 T5/6 (b)(a)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
29.	1RIX-PR035 7/15 [ODCM SR 3.9.1.1 T2 (a)(c)] (also verify Ch 14 not deleted - supports Ch 15) (Ch 15 is INOP when flow < 45 LPM)	/ /	/ /	/ /	/ /	/ /	/ /	/ /
30.	1RIX-PR041 7/15 [ODCM SR 3.9.1.1 T2 (a)(c)] (also verify Ch 14 not deleted - supports Ch 15) (Ch 15 is INOP when flow < 45 LPM)	/ /	/ /	/ /	/ /	/ /	/ /	/ /
31.	1RIX-PR034 [ODCM SR 3.9.1.1 T1 (c)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
32.	1RIX-PR009A, B, C, D [ITS SR 3.3.7.1.1 T1 (g)(j)(k)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /
33.	1RIX-AR035 [ORM TR 4.2.6.1 Tc (a)]	/ /	/ /	/ /	/ /	/ /	/ /	/ /

†   0UIX-PR050 should be used as the primary means of satisfying ORM Channel Checks.

Recorders 1UR-EM015 (60 meter wind velocity and direction), 1UR-EM016 (10 meter wind velocity and direction), and 1UJR-EM014 Pt. 3 (Delta Temperature) may be used to satisfy the channel checks when 0UIX-PR050 is inoperable or not communicating (POLL OFF) with the AR/PR LAN.

If 0UIX-PR050 is inoperable or not communicating (POLL OFF) with the AR/PR LAN, contact the Buffer System Manager to notify IDNS that meteorological data will be unavailable.

If channel checks are performed with the recorders, a notation shall be made in the Comments section.

(a)   At all times.
(b)   When standby gas treatment system is in standby or operation.
(c)   During operation of the main condenser air ejector(s).
(d)   Any time system is in service.
(e)   With fuel in the new fuel storage vault.
(f)With irradiated fuel in the spent fuel storage pool.
(g)   During operations with a potential for draining the reactor vessel.
(h)   During movement of recently irradiated fuel assemblies in the primary or secondary containment.
(i)During movement of recently irradiated fuel assemblies in the fuel building.
(j)MODES 1, 2, 3

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

(k)   During CORE ALTERATIONS, and
        during movement of irradiated fuel assemblies in the primary or secondary
        containment.

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

	MON	TUE	WED	THU	FRI	SAT	SUN

8.29   DIV 1 and 2 H2/O2 MONITOR
(Shiftly Comp Action per EC 334602(337640) pending final resolution due to 5040-5G(5H) Heat Trace input defeated.)

(Initial) At applicable H2/O2 Div 1:	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Panel, 1H13-P867/P868, verify/reset any alarms per CPS 3315.01 (CM). Div 2:	/ /	/ /	/ /	/ /	/ /	/ /	/ /

❷   If alarm does not reset, declare affected Divisional H2/O2 INOP per ORM OR 2.2.17.

⓿

8.30   ESSENTIAL SWITCHGEAR ROOM (VX) VENTILATION

(Initial) Verify the Alarms clear?							
temperature of the areas cooled by the VX system Div 1 (5050-2D/3D)	/ /	/ /	/ /	/ /	/ /	/ /	/ /
is ≤ 95°F. (ORM TR 4.4.9.1; min once every 12 hours Div 2 (5052-2D/3D)	/ /	/ /	/ /	/ /	/ /	/ /	/ /
but performed shiftly for log keeping consistency.) Div 3 (5042-3E/4E)	/ /	/ /	/ /	/ /	/ /	/ /	/ /

Normally verified by absence of listed annunciator alarms.

If alarm window is INOP, THEN verify via local area/panel verification and document in Comments section.
   Div 1 VX: 1PL65JA, VX area temperatures - 1TIT-VX001 (1A1), 1TIT-VX007 (1A) & 1ITI-VX056 (Batt Rm).
   Div 2 VX: 1PL65JB, VX area temperatures - 1TIT-VX002 (1B1), 1TIT-VX008 (1B) & 1ITI-VX057 (Batt Rm).
   Div 3 VX: 1PL65JC, VX area temperatures - 1TIT-VX003 (1C1), 1TIT-VX009 (1C) & 1ITI-VX058 (Batt Rm).

	MON	TUE	WED	THU	FRI	SAT	SUN

8.31   SURVEILLANCE COMPLETION

(Record)Record finish time of CPS 9000.01D001.	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____	M _____ D _____ S _____

 9000.01D001

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

SHIFT TEST RESULTS

COMMENTS	SMngt REVIEW	F U L L	P A R T	Operability Requirements		Other Requirements	
				P A S S	F A I L	P A S S	F A I L
***							
_____	___	( )	( )	( )	( )	( )	( )
_____	___	( )	( )	( )	( )	( )	( )
_____	___	( )	( )	( )	( )	( )	( )
***							
_____	___	( )	( )	( )	( )	( )	( )
_____	___	( )	( )	( )	( )	( )	( )
_____	___	( )	( )	( )	( )	( )	( )
***							
_____	___	( )	( )	( )	( )	( )	( )
_____	___	( )	( )	( )	( )	( )	( )
_____	___	( )	( )	( )	( )	( )	( )
***							
_____	___	( )	( )	( )	( )	( )	( )
_____	___	( )	( )	( )	( )	( )	( )
_____	___	( )	( )	( )	( )	( )	( )
***							
_____	___	( )	( )	( )	( )	( )	( )
_____	___	( )	( )	( )	( )	( )	( )

Rev. 50d

9000.01D001

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

| | | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |

****

		( )	( )	( )	( )	( )	( )
		( )	( )	( )	( )	( )	( )
		( )	( )	( )	( )	( )	( )

****

		( )	( )	( )	( )	( )	( )
		( )	( )	( )	( )	( )	( )
		( )	( )	( )	( )	( )	( )

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Rev. 50d

9000.01D001

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

CONTROL ROOM OPERATOR SURVEILLANCE LOG - MODE 1, 2, 3 DATA SHEET

SUPPLEMENTAL REVIEW SHEET

Corrective Action Taken

Operability Requirements:

    ITS LCOs: _see body of Data Sheet_

    ORM ORs: _see body of Data Sheet_

    ODCM ORs: _see body of Data Sheet_

As applicable:

    Initiated Condition Report No. _____

    Initiated Work Document No. _____

Comments/Deficiencies

_____

_____

_____

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Rev. _50d_

9000.01D001

CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3

_____

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_____

REVIEW AND APPROVAL

SMngt Review: _____
                              (Signature)   (Date)

Rev. 50d

CLINTON POWER STATION

Job Performance Measure

Review surveillance and recognize entry condition to Reactor Coolant leakage off-Normal(Faulted)

SRO

JPM Number: 900001SAF01

Revision Number: 00

Date: 8/9/06

Developed By:	Fred Worrell	8/9/06
	Instructor	**Date**
Reviewed By:	Stacey Hagan	6/15/07
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

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

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

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and

b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor	Date

SME/Instructor	Date

SME/Instructor	Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
0	8/9/06	Converted from JPM 900001.0101

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

> I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.
>
> No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

> Review of the Reactor Coolant Leakage verification and calculation (CPS 9000.01D001, Control Room Surveillance Log – Mode 1, 2, 3 Data Sheet) enter CPS 4001.01, Reactor Coolant Leakage is required.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

> None

PROCEDURAL/REFERENCES:

> CPS 9000.01, CONTROL ROOM SURVEILLANCE LOG, Revision 34
> CPS 9000.01D001, CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3, DATA SHEET, Revision 50, Section 8.9, Attached to the JPM
> CPS 4001.01, Reactor Coolant Leakage revision 10

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

- Entry condition to CPS 4001.01, Reactor Coolant Leakage met ($\geq$2.5 gpm unidentified leakage) Give the examinee the attached copy of CPS 9000.01D001, DW Floor Drain Leakage calculation and verification after you have presented the Initial Conditions and Initiating Cue.

- All pre-job briefings are completed.

Clinton Power Station
Job Performance Measure (JPM)

-

INITIAL CONDITIONS:

You are the CRS. The unit is in Mode 1 at near rated power. The Tuesday Swing shift Control Room Surveillance Log has been completed.

INITIATING CUE:

CAUTION
- All pre-job briefings are completed.
- No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur. (This statement should be removed if this is a Simulator JPM)
- Do NOT shine any type light into a panel.

You are directed to review the Swing shift's Drywell Floor Drain Leakage Rate calculation and take any action you deem appropriate.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

CPS 9000.01D001

---

1   Reviews the Tuesday Swing shift DW Floor Drain leakage calculation

Standard:

Cue: 1.   Provide the student with the marked up 9000.01D001

Comments

SAT ☐   UNSAT ☐   Comment Number

Clinton Power Station
Job Performance Measure (JPM)

---

*2	**Identifies 8.9.2.c) reads greater than 2.5 gpm**
Standard:	Identifies entry condition to CPS 4001.01, Reactor Coolant Leakage met (>2.5 gpm unidentified leakage)
Cue:	If redirected to re-perform state complete your review
Comments	

SAT ☐   UNSAT ☐   Comment Number _____

---

*3	**Identifies 8.9.3.f) reads greater than 2.5 gpm**
Standard:	Identifies entry condition to CPS 4001.01, Reactor Coolant Leakage met (>2.5 gpm unidentified leakage)
Cue:	If redirected to re-perform state complete your review
Comments	

SAT ☐   UNSAT ☐   Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

---

*4	**Identifies 8.9.3.g) reads greater than 2.5 gpm**

Standard: Identifies entry condition to CPS 4001.01, Reactor Coolant Leakage met (>2.5 gpm unidentified leakage)

Cue:

Comments

     SAT ☐   UNSAT ☐   Comment Number _____

TERMINATING CUES:

Review the DW Floor Drain leakage verification log and recognizes entry condition to CPS 4001.01, Reactor Coolant Leakage

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ SRO   ☐ STA   ☐ SRO Cert

JPM Title: Review surveillance and recognize entry condition to Reactor Coolant leakage off-Normal(Faulted)

JPM Number: 900001SAF01   Revision Number: 0

Task Number and Title: 900001.01, Complete Control Room actions to perform the Control Room Surveillance Log

K/A System	K/A Number	Importance (RO/SRO)	
223001	2.2.12	3.0	3.4

Suggested Testing Environment: Any

Actual Testing Environment: ☐ Simulator   ☐ Plant   ☐ Control Room

Testing Method: ☐ Simulate   **Faulted:** ☒ Yes   ☐ No
             ☐ Perform   **Alternate Path:** ☐ Yes   ☒ No

Time Critical: ☐ Yes   ☒ No

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

References:

CPS 9000.01, CONTROL ROOM SURVEILLANCE LOG, Revision 34d
CPS 9000.01D001, CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3, DATA SHEET, Revision 50d, Section 8.9, Attached to the JPM
CPS 4001.01, Reactor Coolant Leakage revision 10c

EVALUATION SUMMARY:

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

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

Comments: _____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Initial Conditions

You are thr CRS. The unit is in Mode 1 at full power. The Tuesday Swing shift Control Room Surveillance Log has been completed.

Initiating Cue

> ### CAUTION
> - All pre-job briefings are completed.
> - No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur. (This statement should be removed if this is a Simulator JPM)
> - Do NOT shine any type light into a panel.

You are directed to review the Swing shift's Drywell Floor Drain Leakage Rate calculation and take any action you deem appropriate.

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE

NOTE

CPS 4001.01, Reactor Coolant Leakage shall be entered if any of the following leakage rates are observed:

- *Any ITS LCO 3.4.5 RCS Operational LEAKAGE limitation is exceeded.*
- *Unidentified LEAKAGE increase of ≥ 0.5 gpm in a 4 hour period (1.0 gpm in 8 hours).*
- *Unidentified LEAKAGE exceeds 2.5 gpm.*

1.   (Record)   Flow Readings From 1H13-P855
             (at ≈ 8 hour intervals)

a)   Time readings taken

	MON	Today	WED	THU	FRI	SAT	SUN
M	0005	0010					
D	0810	0810					
S	1615	1615					

b)   DW FLR FLOW FROM SUMP TOTAL
(ITS LCO 3.4.5 (a))
If the Sump (bubblier level) Flow Detector totalizer in step 8.9.1.b is not functioning, use alternate Pump (magnetic motor) Flow Detector totalizer data in step 8.9.1.c for unidentified leakage calculations

	MON	Today	WED	THU	FRI	SAT	SUN
M	048931	052099					
D	049987	053155					
S	051043	054960					

c)   DW FLR FLOW PMP DISCH TOTAL
(ITS LCO 3.4.5 (a))

	MON	Today	WED	THU	FRI	SAT	SUN
M	003133	006301					
D	004189	007357					
S	005245	008413					

d)   DW EQUIP FLOW
(ITS LCO 3.4.5 (a))
If DW Equip Flow Totalizer is not functioning, a Manual Determination of DW RE In-Leakage Flow Rate shall be performed using methodology described in CPS 3315.02, Leak Detection (LD) and recorded in step 8.9.4.g.1.

	MON	Today	WED	THU	FRI	SAT	SUN
M	007542	010710					
D	008598	011766					
S	009654	012822					

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE (cont'd)

2. DW Floor Drain Sump Flow Rate Verifications (at ≈ 8 hour intervals)

		MON	Today	WED	THU	FRI	SAT	SUN

a) Check instrument used:

If the preferred DW FLR DRN (SUMP) FLOW, LOW RANGE 1E31-R552, Channel 1 is not functioning, use the alternate DW FLR DRN (PUMP) FLOW, LOW RANGE, 1E31-R551, Channel 1.

	MON	Today	WED	THU	FRI	SAT	SUN
	X SUMP PUMP	**X** SUMP PUMP	SUMP PUMP	SUMP PUMP	SUMP PUMP	SUMP PUMP	SUMP PUMP

b) (Record - Monday only) Enter the DW FLR DRN FLOW, LOW RANGE values from Sunday. (From step 8.9.2.c)

	MON	Today	WED	THU	FRI	SAT	SUN
M	2.1						
D	2.1						
S	2.2						

c) (Record) Enter the DW FLR DRN (SUMP) FLOW, LOW RANGE 1E31-R552, Channel 1, or alternate DW FLR DRN (PUMP) FLOW, LOW RANGE 1E31-R551, Channel 1.

	MON	Today	WED	THU	FRI	SAT	SUN
M	2.2	2.4					
D	2.2	2.4					
S	2.2	2.8					

d) (Initial) (MODE 1) Verify current DW Floor Drain/ flow rate is ≤ 2 gpm above any reading of the previous 24 hours. (ITS SR 3.4.5.1)

	MON	Today	WED	THU	FRI	SAT	SUN
M	DS	DS					
D	BR	BR					
S	JG	JG					

e) (Initial) Verify ≤ 5 gpm on DW FLR DRN (SUMP) FLOW, LOW RANGE 1E31-R552 Channel 1 or alternate DW FLR DRN (PUMP) FLOW, LOW RANGE 1E31-R551, Channel 1. (ITS SR 3.4.5.1)

	MON	Today	WED	THU	FRI	SAT	SUN
M	DS	DS					
D	BR	BR					
S	JG	JG					

		MON	Today	WED	THU	FRI	SAT	SUN

8.9   REACTOR COOLANT SYSTEM - OPERATIONAL LEAKAGE (cont'd)

3.   Unidentified Leakage Calculation using Flow Totalizer

a)   Check instrument used:

		MON	Today	WED	THU	FRI	SAT	SUN
If the preferred DW FLR DRN (SUMP) FLOW, LOW RANGE 1E31-R552, Channel 1 is not functioning, use the alternate DW FLR DRN (PUMP) FLOW, LOW RANGE, 1E31-R551, Channel 1.		**X** SUMP PUMP	**X** SUMP PUMP	SUMP PUMP	SUMP PUMP	SUMP PUMP	SUMP PUMP	SUMP PUMP

b)   (Record) The current value of DW FLR FLOW SUMP TOTAL from step 8.9.1.b or alternate DW FLR FLOW PMP DISCH TOTAL from step 8.9.1.c.

c)   (Record) The value of DW FLR SUMP FLOW taken ≈ 24 hours before (DW FLR FLOW PMP DISCH TOTAL, alternate)

       Sunday's value: 045907 / 046915 / 047923

d)   (Record) The total number of gallons by subtracting c) from b).

e)   (Record) The number of minutes since reading in item c).

f)   (Record) Flow rate since last reading: Reading from d) divided by elapsed time e).

		MON	Today	WED	THU	FRI	SAT	SUN
M	b)	048931	052099	_____	_____	_____	_____	_____
	c)	045907	048931	_____	_____	_____	_____	_____
	d)	3024	3168	_____	_____	_____	_____	_____
	e)	1440	1445	_____	_____	_____	_____	_____
	f)	2.10	2.19	_____	_____	_____	_____	_____
D	b)	049987	053155	_____	_____	_____	_____	_____
	c)	046915	049987	_____	_____	_____	_____	_____
	d)	3072	3168	_____	_____	_____	_____	_____
	e)	1440	1440	_____	_____	_____	_____	_____
	f)	2.13	2.2	_____	_____	_____	_____	_____
S	b)	051043	054960	_____	_____	_____	_____	_____
	c)	047923	051043	_____	_____	_____	_____	_____
	d)	3120	3917	_____	_____	_____	_____	_____
	e)	1440	1440	_____	_____	_____	_____	_____
	f)	2.17	2.72	_____	_____	_____	_____	_____

g)   (Record) Enter the

       DW FLR DRN (SUMP) FLOW, LOW RANGE

       from recorder 1E31-R552, Channel 1.

	MON	Today	WED	THU	FRI	SAT	SUN
M	2.1	2.4					
D	2.1	2.4					
S	2.2	2.8					

h)   (Record) Enter the

       DW FLR DRN (PUMP) FLOW, LOW RANGE

       from recorder 1E31-R551, Channel 1.

	MON	Today	WED	THU	FRI	SAT	SUN
M	2.2	2.3					
D	2.2	2.3					
S	2.2	2.4					

3. Unidentified Leakage Calculation using Flow Totalizer (cont'd)

i) (Initial) Perform Channel Check of the calculated DW Floor Drain Sump flow rate (Step f above) and DW FLOOR DRAIN (SUMP) and (PUMP) FLOW rates (g and h above).

DS/BR/JG	DS/BR/JG	/ /	/ /	/ /	/ /	/ /

Comparison Guideline: 1.4 gpm

If MODE of operation of Sump Pumps (auto/manual) is changed, then at least
2 pump out cycles must occur before a reliable Channel Check can be performed.

CLINTON POWER STATION

Job Performance Measure

Determine Expected Dose Operator

Would Receive While Performing an LLRT

JPM Number: 99555501NAN01

Revision Number: 00

Date: 12/15/05

Developed By:	Dallas Clines	10/5/04
	Instructor	**Date**
Reviewed By:	Jim Bunning	12/15/04
	Operations Representative	**Date**

JPM Number: 99555501NAN01

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

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

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

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____   _____
SME/Instructor   Date

_____   _____
SME/Instructor   Date

_____   _____
SME/Instructor   Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
00		New format and numbering convention, revalidated. This replaces JPM 033299J006. Revision number reset to 0.

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Determine Expected Dose Operator Would Receive While Performing LLRT

JPM Number: 99555501NAN01   Revision Number:00

Task Number and Title:995555.01, Complete in-plant radiological practices for High Radiation Zone

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.3.10	2.9	3.3

Suggested Testing Environment: Any

Actual Testing Environment: ☐ Simulator   ☐ Plant   ☐ Control Room

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

    Time Critical: ☐ Yes   ■ No

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

References: CPS No. RP-AA-203, Exposure Control and Authorization, Rev. 3

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

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

Comments: _____

_____

_____

_____

_____

_____

Evaluator's Name:_____ (Print)

Evaluator's Signature:_____Date:_____

JPM Number: 99555501NAN01

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

TASK STANDARDS:

- Expected dose is determined and operators, who would not exceed their dose limit, are selected.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- Radiation survey map of the Containment Steam Tunnel
- Simplified drawing of penetration 1MC-061
- RP-AA-203, Exposure Control and Authorization
- Calculator

PROCEDURAL/REFERENCES:

- CPS No. RP-AA-203, Exposure Control and Authorization, Rev. 3

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

- All pre-job briefings are completed.

JPM Number: 99555501NAN01

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

You are part of a team that is responsible for performing LLRTs during a refueling outage. You have been given the responsibility to set up for a test on RWCU LLRT 1MC-061. This will require you and one other member of your team to perform tasks in the Containment Steam Tunnel approximately 30cm from 1G33-F053. The tasks are estimated to take 90 minutes to complete.

The SRO in charge of the LLRTs has asked you to determine the following:

- Expected maximum dose that would be received.
- Which member(s) of the team could assist you <u>without</u> requiring a Dose Level Extension Form.

The following is a list of LLRT Team Members and their exposure history.

Name	Annual TEDE Dose: Non ROG	Annual TEDE Dose: Mid West ROG (EXCEPT CPS)	Annual TEDE Dose: Clinton Station
John	0 mrem	245 mrem	1547 mrem
Tim	261 mrem	89 mrem	1319 mrem
Paul	154 mrem	0 mrem	1625 mrem

<u>NOTE TO EVALUATOR</u>

When the Initiating Cue has been read by the student and acknowledged, <u>provide the following to the student.</u>

- Simplified drawing of penetration 1MC-061
- RP-AA-203
- Calculator

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

---

1. Locates survey map of the Containment Steam Tunnel

Standard: Describes the locations where survey maps can be found.

Cue: When operator describes where survey maps are located, provide him with a copy of the Containment Steam Tunnel map.

Comments   Survey maps may be found in the following locations:
- Service Building entrance to the RCA
- R & S line near the Maintenance Area
- Radiation Protection Desk
- Access Control Point

SAT ☐   UNSAT ☐   Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

---

2. Determines the Dose Rate near 1G33-F053

Standard: Dose Rate determined to be 200 mr/hr @ 30 cm from valve 1G33-F053, and/or 150 mr/hr in the area around 1G33-F053.

Cue: None

Comments Maximum dose is calculated using the dose rate at 30cm (work area as stated in initiating cue) or 200 mr/hr.

SAT ☐   UNSAT ☐   Comment Number _____

---

*3.   Calculates maximum expected dose.

Standard: Expected maximumdose calculated to be 300mrem.

Cue: None

Comments

SAT ☐   UNSAT ☐   Comment Number _____

---

*4   Determines which operators could assist without requiring a Dose Level Extension Form.

Standard: Operator determines that Tim could assist.

Cue: None

Clinton Power Station
Job Performance Measure (JPM)

Comments: The Admin Limit that would require a Dose Level Extension Form is 2000 mr/yr.

This table shows the calculations for the correct dose rate of 200mr/hr:

Name	Annual TEDE Dose: Non ROG	Annual TEDE Dose: Mid West ROG (EXCEPT CPS)	Annual TEDE Dose:CPS	Total Received @ **300 mrem**
John	0 mrem	245 mrem	1547 mrem	2092
Tim	**261 mrem**	**89 mrem**	**1319 mrem**	**1969**
Paul	154 mrem	0 mrem	1625 mrem	2079

This table shows the calculations if the incorrect dose rate of 150mr/hr were to be used:

Name	Annual TEDE Dose: Non ROG	Annual TEDE Dose: MWROG	Annual TEDE Dose:CPS	Total Received @ **225 mrem**
John	0 mrem	245 mrem	1547 mrem	2017
Tim	**261 mrem**	**89 mrem**	**1319 mrem**	**1894**
Paul	154 mrem	0 mrem	1625 mrem	2004

SAT ☐   UNSAT ☐   Comment Number _____

TERMINATING CUES:

Operator(s) has been named to assist in the LLRT tasks.

STOP TIME: _____

INITIAL CONDITIONS AND INITIATING CUE:

You are part of a team that is responsible for performing LLRTs during a refueling outage. You have been given the responsibility to set up for a test on RWCU LLRT 1MC-061. This will require you and one other member of your team to perform tasks in the Containment Steam Tunnel approximately 30cm from 1G33-F053. The tasks are estimated to take 90 minutes to complete.

The SRO in charge of the LLRTs has asked you to determine the following:

- Expected maximum dose that would be received.
- Which member(s) of the team could assist you without requiring a Dose Level Extension Form.

The following is a list of LLRT Team Members and their exposure history.

Name	Annual TEDE Dose: Non ROG	Annual TEDE Dose: Mid West ROG (EXCEPT CPS)	Annual TEDE Dose: Clinton Station
John	0 mrem	245 mrem	1547 mrem
Tim	261 mrem	89 mrem	1319 mrem
Paul	154 mrem	0 mrem	1625 mrem

Exelonsm

Nuclear

CLINTON POWER STATION

Job Performance Measure

EAL Determination

SRO Only

JPM Number: 99777701SAN12

Revision Number: 00

Date: 07/16/07

Developed By:	**Tom Pickley**	**07/16/07**
	Instructor	**Date**
Reviewed By:	**Stacey Hagan**	**07/18/07**
	Operations Representative	**Date**

**Clinton Power Station
Job Performance Measure (JPM)**

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

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

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

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and

b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

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

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
0	3/16/07	Revision 0

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

> I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.
>
> No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

- The event has been classified as an GENERAL EMERGENCY, FG1 per Clinton Station, NEI Revision 4 EAL Set

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None.

PROCEDURAL/REFERENCES:

- Clinton Station, NEI Revision 4 EAL Set

- EP-AA-111-F-07, Rev B, CLINTON PLANT BASED PAR FLOWCHART

- EOP-8 R 27

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

- A copy of EAL's on green paper will not be provided.

**Clinton Power Station
Job Performance Measure (JPM)**

INITIAL CONDITIONS:

You are the Shift Manager. The unit was at near rated power.

INITIATING CUE:

CAUTION
- All pre-job briefings are completed.
- No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.
- Do NOT shine any type light into a panel.

A Group 1 isolation occurred due to high Aux Building Steam Tunnel Temperatures. All Control Rods inserted and Reactor Water Level is –190 in. When performing the Isolation Check list it was found that 1B21-F016 and 1B21-F019 were not shut. Neither valve will shut from the control room switches. The Aux Building Steam Tunnel Temperature is 205° F and steady.

Determine the correct EAL and Protective Action Requirements if any. This is a time critical JPM. Time starts now.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

EP-AA-1003, Radiological Emergency Plan Annex for Clinton Station

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*1   Determines that water level less than –162 in. is a loss of RCS.

Standard: First part of the threshold value for FG1 has been met.

Cue:

Comments

SAT ☐   UNSAT ☐   Comment Number _____

---

*2   Determines that the Unisolable primary system leakage outside the primary containment with an area temperature ≥ EOP-8 Max. Safe Value is a loss of containment.

Standard: Second part of the threshold value for FG1 has been met.

Cue:

Comments

SAT ☐   UNSAT ☐   Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

---

*3 **Determines that water level less than –187 in. is a loss of Fuel Clad.**

Standard: Third part of the threshold value for FG1 has been met.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

---

*4 **Declares a General Emergency per FG1.**

Standard: General Emergency has been declared per FG1 within 15 minutes of the start time.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

---

*5 **Determines the PAR is:**
Evacuate 5 Mile Radius & 10 Miles Downwind (Subareas 1 & 7).
Advise Remainder or EPZ to Monitor Local Radio Stations.

Standard: PARs determined within 15 minutes of declaring the General Emergency.

Cue: If asked, the Wind direction is from 92 degrees.

Comments

SAT ☐ UNSAT ☐ Comment Number _____

**Clinton Power Station
Job Performance Measure (JPM)**

TERMINATING CUES:

General Emergency has been declared per FS1 within 15 minutes of the start time.

And

PARs determined within 15 minutes of declaring the General Emergency.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name:

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: EAL Determination

JPM Number: 99777701SAN12 Revision Number: 0

Task Number and Title: 997777.01 Classify Emergency Action Level

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.4.41		4.1

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate **Faulted:** ☐ Yes ☒ No
☐ Perform **Alternate Path:** ☐ Yes ☒ No

Time Critical: ☒ Yes ☐ No

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

References: Clinton Station, NEI Revision 4 EAL Set

EP-AA-111-F-07, Rev B, CLINTON PLANT BASED PAR FLOWCHART

EOP-8 R 27

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

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

Comments:

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Clinton Power Station
Job Performance Measure (JPM)

Initial Conditions

You are the Shift Manager. The unit was at near rated power.

Initiating Cue

<div style="border:1px solid black; padding:10px;">

<u>CAUTION</u>

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

</div>

A Group 1 isolation occurred due to high Aux Building Steam Tunnel Temperatures. All Control Rods inserted and Reactor Water Level is –190 in. When performing the Isolation Check list it was found that 1B21-F016 and 1B21-F019 were not shut. Neither valve will shut from the control room switches. The Aux Building Steam Tunnel Temperature is 205° F and steady.

Determine the correct EAL and Protective Action Requirements if any. This is a time critical JPM. Time starts now.