

FINAL AS-ADMINISTERED ADMINISTRATIVE JPMS

FOR CLINTON INITIAL EXAMINATION - JULY 2001

Facility: <u>Clinton Power Station</u>		Date of Examination: <u>07/16/01</u>
Exam Level (circle one): <u>RO</u> / SRO		Operating Test No.: <u>2001-01</u>
Administrative Topic/Subject Description		Describe method of evaluation 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations Fuel Handling	JPM – Perform CPS 9000.03, Core Alteration Surveillance Log. (Faulted) 2.1.18
	Conduct of Operations Plant Parameter Verification	JPM – Determine if Power, Flow, or Core Thermal Limits have been Exceeded. (Faulted) 2.1.19
A.2	Equipment Control Surveillance Testing	JPM – Perform restoration section of CPS 9011.01, "Control Rod/ Position Indication Operability" (Faulted) 2.2.12
A.3	Radiation Control Calculating Exposure	JPM – Determine dose operator would receive while performing an LLRT 2.3.10
A.4	Emergency Plan Emergency Communications	JPM – Make a plant announcement for FIRE in the Paint and Oil Storage Room with area evacuation. 2.4.43

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

TASK TITLE: Perform CPS 9000.03, Core Alteration Surveillance Log - Faulted

TASK NUMBER: 013299C003

APPLICABILITY: RO SRO

TIME CRITICAL: YES NO FAULTED: YES NO

TRAINEE

DATE

PASS FAIL

EVALUATOR

COMMENTS: _____

METHOD OF TESTING:

Simulated Performance Actual Performance

Classroom Simulator Plant

APPROXIMATE TIME FOR COMPLETION: 17 minutes

Prepared/Revised by: _____ Date: _____

Approved by: _____ Date: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

Any IC in which Mode 5 conditions are established.
SRM 'A' is less than 3 CPS
Key left in Mode Switch.

TASK STANDARDS:

- Perform CPS No. 9000.03 CORE ALTERATION SURVEILLANCE LOG with no deviation from the procedure.
- Identify incorrect mode switch position, and inoperable SRM "A".

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

Completed SRM portion of CPS 9000.01D002
OD-7 printout

PROCEDURAL/REFERENCES:

CPS 9000.03, CORE ALTERATION SURVEILLANCE LOG, Rev. 27
CPS 9000.01, MCR SURVEILLANCE LOG – MODE 4, 5 DATA SHEET, Rev. 35

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.

INITIAL CONDITIONS AND INITIATING CUE:

It is Monday morning at 0400. The plant is in Mode 5 with Core Alterations scheduled to begin in quadrant 'A'. You have been directed to perform CPS 9000.03, CORE ALTERATION SURVEILLANCE LOG. Report when you have completed the task.

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

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. **5.2** Notify Shift Management of the start of this test.

STANDARD: Operator reports that he is starting test and records information in section 5.2 of
CPS 9000.03, CORE ALTERATION SURVEILLANCE LOG.

CUE: Acknowledge start of test.

COMMENTS: Provide candidate with a copy of CPS 9000.03.

SAT _____ UNSAT _____

CLINTON POWER STATION
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RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

*2 8.1.1 Reactor Mode Selector Switch is locked in the Refuel Position (with the key removed).

STANDARD: Operator determines that Mode Selector Switch is in the Refuel Position, but that the key is still in the switch. Reports this to the CRS.

CUE: Acknowledge report from operator. Direct key removal and continuation of surveillance.

COMMENTS: Further action will need to be taken on finding the key in the Mode Selector Switch, but that action may take place concurrently with CPS 9000.03 being performed.

SAT _____ UNSAT _____

3. 8.1.2 All Control Rods are fully inserted.

STANDARD: The operator determines that all control rods are fully inserted.

CUE: Provide operator with OD-7 if requested.

COMMENTS: Operator can determine all rods are in by checking full core display or calling up an OD-7.

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

4. 8.1.3.1 Verify SRM portion of CPS 9000.01D002, Control Room Operator Surveillance Log – Mode 4, 5 Data Sheet is current for the SRMs required to satisfy the sub-step 2 below.

STANDARD: Operator acquires current CPS 9000.01D002, give to operator when demanded.

CUE:

COMMENTS: Operator will use this in the next step.

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

*5. 8.1.3.2 Verify an OPERABLE SRM detector is located in:

1. The fueled region; and
2. The core quadrant where CORE ALTERATIONS are being performed when the associated SRM is included in the fueled region; and
3. A core quadrant, adjacent to where CORE ALTERATIONS are being performed, when the associated SRM is included in the fueled region.

STANDARD: Operator determines the following, and reports this to the CRS:

- SRM 'A' is reading < 3 cps.
- Operable SRM is not located in the quadrant 'A'

CUE: Acknowledge report that SRM 'A' is reading < 3 cps and operable SRM is not located in quadrant 'A'.

COMMENTS: Item 2 above will not be able to be signed off.

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

6. 8.1.4 Verify direct communication between the Control Room and the refuel platform personnel during CORE ALTERATIONS, except during movement of control rods with their normal drive system.

STANDARD: Operator describes communication that would be set up.
- Sound Powered Phone
- Telephone Backup

CUE: Communications are established.

COMMENTS:

SAT _____ UNSAT _____

7. 8.1.5 Reactor Pressure Vessel Level is at least 22 ft. 8 in. over top of the reactor pressure vessel flange, during movement of irradiated fuel.

STANDARD: Determines that Reactor Pressure Vessel Level is at least 22 ft. 8 in. over the top of the reactor pressure vessel flange.

CUE: Reactor Pressure Vessel Level is greater than 22 ft. 8 in. over the top of the reactor pressure vessel flange.

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

8. 8.1.6 Reactor Pressure Vessel Level is ≥ 23 feet above the top of irradiated fuel assemblies seated within the RPV during movement of new fuel assemblies or handling of control rods (by other than their normal drive system) within the RPV.

STANDARD: Determines that Reactor Pressure Vessel Level is ≥ 23 feet above the top of the active fuel assemblies seated within the RPV.

CUE: Reactor Pressure Vessel Level is ≥ 23 feet above the top of the active fuel assemblies seated within the RPV.

COMMENTS:

SAT _____ UNSAT _____

9. 8.2 (Record) Finish time of CPS 9000.03.

STANDARD: Operator records finish time.

CUE:

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

STOP TIME: _____

K/A REFERENCE NUMBERS

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>Importance Rating</u>	
		<u>RO</u>	<u>SRO</u>
294000	2.1.19	3.0	3.0
	2.1.25	2.8	3.1

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

INITIATING CUE

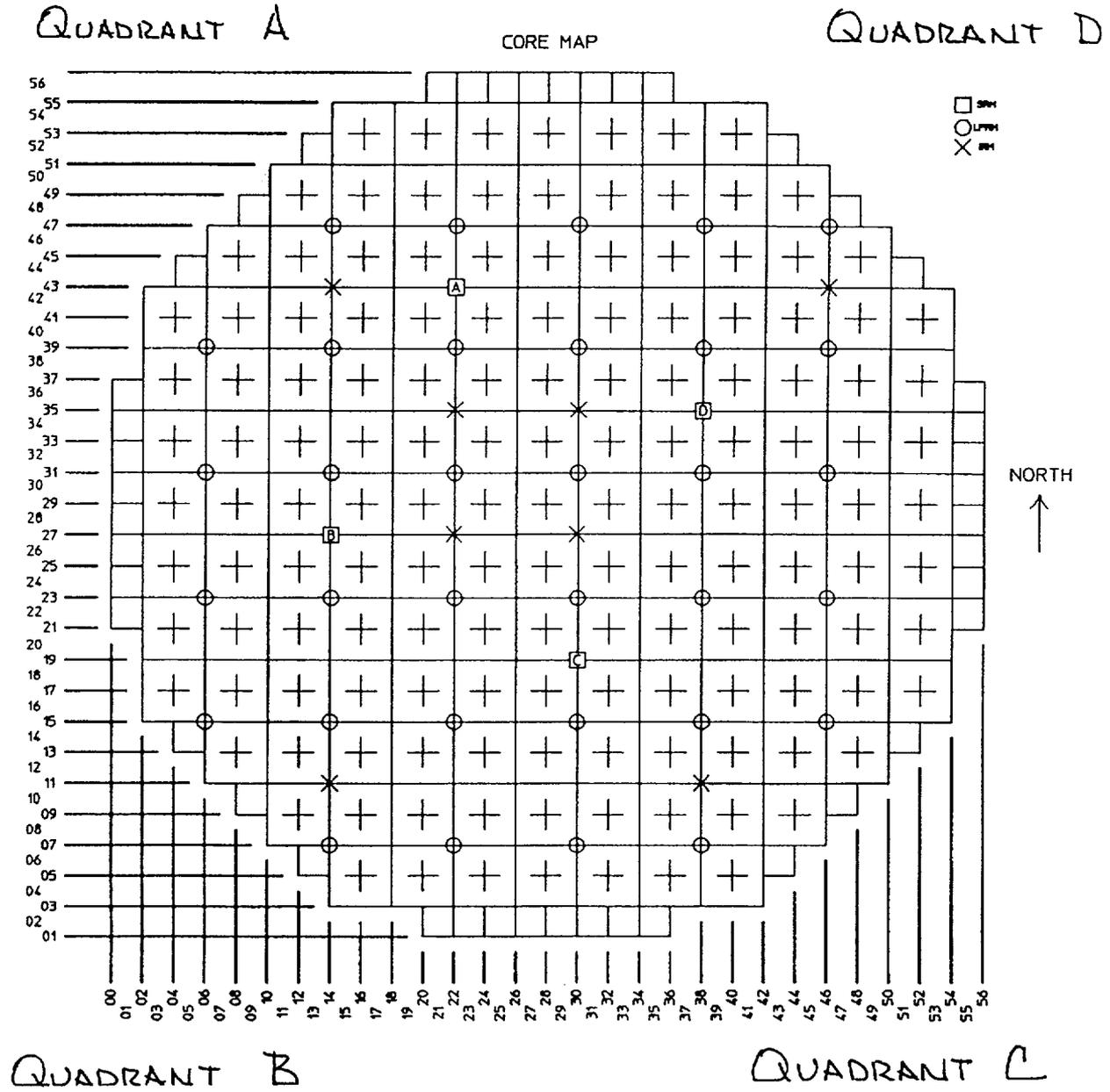
It is Monday morning at 0400. The plant is in Mode 5 with Core Alterations scheduled to begin in quadrant 'A'. You have been directed to perform CPS 9000.03, CORE ALTERATION SURVEILLANCE LOG. Report when you have completed the task.

UNIT 1, PAGE 1 OF 1

OD-7, CONTROL ROD NOTCH POSITIONS, NEW SCAN (Option 2)

53				0	0	0	0	0	0	0			
49			0	0	0	0	0	0	0	0	0		
45		0	0	0	0	0	0	0	0	0	0	0	
41	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0
13		0	0	0	0	0	0	0	0	0	0	0	
9			0	0	0	0	0	0	0	0	0		
5				0	0	0	0	0	0	0			
	4	8	12	16	20	24	28	32	36	40	44	48	52

CORE MAP
Clinton Unit 1



CONTROL ROOM SURVEILLANCE LOG - MODE 4, 5 DATA SHEET**SCOPE OF REVISION:**

- Periodic review and format update per CPS 1005.00/01/02 criteria. Major layout updates to match improvements in D001.
- 8.4.1: Benchmarked BWROG SRM Channel Check Comparison Guideline added per RF6 Restart OPs Self Assessment (CCF 00-0081: Westbrook).
- 8.4.7.b: Use of CM indication updated to match approved PDR 99-1254 on D001 .
- 8.12: Changed order of occurrence of AR/PR monitors to match AR/PR LAN printout for ease of use by operators. Matches D001 layout.
- 8.12: Removed Rad Monitor ORIX-PR040 CK, covered in 9911.50 (CCF 99-1974).
- 8.12.12: Allows use of the Meteorological Data Recorders as alternative instruments to satisfy ORM 4.2.8.1 channel check requirements (matches PDR 99-1151 to D001).

CONTINUOUS USEORIGINATOR: *Thomas J. Landin*CLASS CODE: *SNND1*ITR: *B. Brehm*APPROVAL DATE: *MAR 09 2000***CURRENT CHANGES TO GENERAL REVISION**

Change #	Date	List of Affected Pages
①	_____	_____
②	_____	_____
③	_____	_____
④	_____	_____
⑤	_____	_____

CONTROL ROOM SURVEILLANCE LOG - MODE 4, 5

	MON	TUE	WED	THU	FRI	SAT	SUN
m	<u>0100</u>	_____	_____	_____	_____	_____	_____
d	_____	_____	_____	_____	_____	_____	_____
s	_____	_____	_____	_____	_____	_____	_____

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

Daily Start Time

Weekly Start Date/Time 7/16/01/ 0100

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

8.1 Reactor MODE Switch Position

1. (Initial) Verify Reactor MODE Switch is LOCKED in SHUTDOWN or REFUEL position when:

a) In MODE 4 when:
Suppression pool water level < 12' 8" or ITS LCO 3.10.4 is being utilized.

OR

b) In MODE 5.
(ORM TR 4.6.7) (Refer to ITS LCO 3.10.2 and 3.10.8 for exceptions.)

2. (Initial) Verify Reactor MODE Switch is LOCKED in REFUEL position when:

a) In MODE 5,

AND

b) Any control rod withdrawn.
(ITS SR 3.9.2.1)

m	<u>lc</u>	_____	_____	_____	_____	_____	_____
d	_____	_____	_____	_____	_____	_____	_____
s	_____	_____	_____	_____	_____	_____	_____
m	_____	_____	_____	_____	_____	_____	_____
d	_____	_____	_____	_____	_____	_____	_____
s	_____	_____	_____	_____	_____	_____	_____

8.2 (Record) Plant Operating MODE.

<u>5</u> / /	/ /	/ /	/ /	/ /	/ /	/ /
--------------	-----	-----	-----	-----	-----	-----

8.3 REACTIVITY CONTROL [MIDs only]
(MODE 5 with a withdrawn control rod)

⓪ (Record) Date/time CPS 9011.01, Control Rod/Position Indication Operability required. (Tracking function for ITS SR 3.9.5.1)

d	_____	_____	_____	_____	_____	_____
t	_____	_____	_____	_____	_____	_____

MON	TUE	WED	THU	FRI	SAT	SUN
-----	-----	-----	-----	-----	-----	-----

8.4 INSTRUMENTATION

8.4.1 Source Range Monitors (SRM)

① SRM Comparison Guideline:

3 to 500 cps when all rods are inserted.

If a channel is > 500 cps, refer to CPS 1401.09 to evaluate channel operability.

1. MODE 4 [DAYS only]

a) Record/Verify ≥ 3.0 cps. Use DCS Display. Verify SRMs full in. (≥ 2 channels) (ITS SR 3.3.1.2.4 T1)	<u>SRM Channel</u> A B C D	___ cps ___ cps ___ cps ___ cps					
b) (Initial) Channel Check SRM indications. • 1H13-P678 • DCS (flux & period) (ITS SR 3.3.1.2.3 T1)		X/ /X					

2. MODE 5 [Shiftly]

a) Record/Verify ≥ 3.0 cps. Use DCS Display. Verify SRMs full in. (≥ 2 channels) (ITS SR 3.3.1.2.4 T1)	<u>SRM Channel</u> Mids A Mids B Mids C Mids D	<u>26</u> cps ___ cps ___ cps ___ cps	___ cps ___ cps ___ cps ___ cps				
b) Record/Verify ≥ 3.0 cps. Use DCS Display. Verify SRMs full in. (≥ 2 channels) (ITS SR 3.3.1.2.4 T1)	<u>SRM Channel</u> Days A Days B Days C Days D	___ 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. Use DCS Display. Verify SRMs full in. (≥ 2 channels) (ITS SR 3.3.1.2.4 T1)	<u>SRM Channel</u> Swings A Swings B Swings C Swings D	___ 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)		DC / /	/ /	/ /	/ /	/ /	/ /

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

TASK TITLE: Determine if Power, Flow or Core Thermal limits have been
Exceeded - Faulted

TASK NUMBER: 011298C524

APPLICABILITY: RO SRO

TIME CRITICAL: YES NO FAULTED: YES NO

_____	_____
TRAINEE	DATE
_____	PASS <input type="checkbox"/> FAIL <input type="checkbox"/>
EVALUATOR	

COMMENTS: _____

METHOD OF TESTING:

Simulated Performance _____ Actual Performance

Classroom Simulator _____ Plant _____

APPROXIMATE TIME FOR COMPLETION: 13 minutes

Prepared/Revised by: _____ Date: _____

Approved by: _____ Date: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

Not Applicable

TASK STANDARDS:

- Perform CPS No. 9820.01 POWER DISTRIBUTION LIMITS with no deviation from the procedure.
- Identifies Highest values of MFLCPR and MFLPD are >1.0.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

CPS 9820.01, POWER DISTRIBUTION LIMITS
CPS 9820.01D001, POWER DISTRIBUTION LIMITS DATA SHEET

PROCEDURAL/REFERENCES:

CPS 9820.01, POWER DISTRIBUTION LIMITS
CPS 9820.01D001, POWER DISTRIBUTION LIMITS DATA SHEET

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.

INITIAL CONDITIONS AND INITIATING CUE:

You are directed to perform the daily surveillance CPS 9820.01, POWER DISTRIBUTION LIMITS. Report when the task is complete.

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

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. 5.1 Shift Management Notification

STANDARD: The operator notifies CRS that he is starting the surveillance.

CUE: Acknowledge notification.

COMMENTS:

SAT _____ UNSAT _____

2. 5.2 Verify Core Thermal Power is \geq 25% RTP.

STANDARD: Verifies Core Thermal Power is \geq 25% RTP by checking the 3D Case.

CUE:

COMMENTS: 3D Case has 99.9% Core Thermal Power

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

3. 5.3 Check the applicable entry condition.

STANDARD: The operator determines that the applicable entry condition is Daily Surveillance, checks the appropriate box and initials on CPS 9820.01D001, POWER DISTRIBUTION LIMITS DATA SHEET.

CUE:

COMMENTS: The entry condition was given in the initiating cue.

SAT _____ UNSAT _____

4. 5.4 Verify 2nd character of 3D CASE ID is an "M".

STANDARD: The operator determines that 2nd character of 3D CASE ID is an "M" and initials CPS 9820.01D001.

CUE:

COMMENTS: CASE ID is FMLD1950708205855

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

5. 5.5 Check applicable RR pump status.

STANDARD: Operator would check the RR pump status on DCS, and check the appropriate box on CPS 9820.01D001.

CUE: Cue operator that 2 RR pumps are running.

COMMENTS:

SAT _____ UNSAT _____

6. 5.6 Check applicable 3D Case OPTION line items:

STANDARD: Operator checks the 3D Case and determines that ARTS, DUAL LOOP, and MANUAL FLOW boxes should be checked on CPS 9820.01D001.

CUE:

COMMENTS: This information is located to the right of OPTION on the 3D Case.

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

7. 8.2 From the 3D Case determine the highest MAPRAT value.

Initial CPS 9820.01D001 if MAPRAT \leq 1.0.

STANDARD: The operator determines the highest MAPRAT value is 0.821 and initials CPS 9820.01D001.

CUE:

COMMENTS:

SAT _____ UNSAT _____

***8 8.3 From the core thermal limits calculation obtained in step 8.1, determine the highest MFLCPR value.**

Initial CPS 9820.01D001 if MFLCPR \leq 1.0.

STANDARD: Determines that the highest MFLCPR value is 1.003 and does not initial CPS 9820.01D001.

CUE:

COMMENTS: Two locations have MFLCPR $>$ 1.0 (37-28 & 39-26)

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

***9 8.4 From the core thermal limits calculation obtained in step 8.1, determine the highest MFLPD value.**

Initial CPS 9820.01D001 if MFLPD \leq 1.0.

STANDARD: The operator determines that the highest value of MFLPD is 1.002 and does not initial CPS 9820.01D001.

CUE:

COMMENTS: MFLPD is > 1.0 at (17-22-18)

SAT _____ UNSAT _____

10. 8.5 Immediately contact SMngt if any of the following conditions occur so that corrective action may be taken in accordance with the appropriate ITS:

1. MAPRAT is > 1.0.
2. MLCPR is > 1.0.
3. MFLPD is > 1.0.

STANDARD: Control Room Supervisor or Shift Manager notified that MFLCPR and MFLPD are out of specification.

CUE:

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

STOP TIME: _____

K/A REFERENCE NUMBERS

Importance Rating

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>RO</u>	<u>SRO</u>
294000	2.1.19	3.0	3.0
	2.1.25	2.8	3.1

CLINTON POWER STATION
 NRC INITIAL LICENSE EXAM 2001-01
 SRO ADMINISTRATIVE JPM

INITIATING CUE

You are directed to perform the daily surveillance CPS 9820.01, POWER DISTRIBUTION LIMITS.
 Report when the task is complete.

MFLCPR	LOC	MFLPD	LOC	MAPRAT	LOC	PCRAT	LOC
1.003	37-28	1.002	17-22-18	0.821	7-28- 5	0.798	41-28-16
1.001	39-26	0.912	7-28- 5	0.817	15-30-16	0.798	19-28-16
0.996	41-28	0.912	41-28-16	0.817	11-22-13	0.797	7-28- 5
0.973	11-28	0.902	19-28-16	0.816	19-26-16	0.791	39-22-20
0.940	13-32	0.896	15-38-18	0.813	19-30-15	0.782	9-22-13
0.939	9-26	0.895	21-26-16	0.803	7-26-12	0.779	11-20-13
0.937	11-20	0.893	17-26-16	0.802	9-36-13	0.779	17-26-16
0.930	39-22	0.889	9-22-13	0.798	11-30-11	0.777	11-28-15
0.927	7-28	0.889	11-20-13	0.796	9-26- 5	0.776	13-32-16
0.923	9-22	0.888	13-32-16	0.795	39-22-20	0.774	47-26-12

SEQ.	B-2	C=MFLCPR	D=MFLPD	M=MAPRAT	P=PCRAT	*=MULTIPLE	CORE AVE	AXIAL							
							NOTCH REL PW	LOC							
53							00	0.238 25							
49							02	0.446 24							
L							04	0.804 23							
45			12	12			06	0.963 22							
							08	1.056 21							
41				P			10	1.158 20							
L							12	1.191 19							
37		12	10	C 10	12		14	1.163 18							
							16	1.182 17							
33							18	1.220 16							
L							20	1.215 15							
29							22	1.187 14							
							24	1.212 13							
25							26	1.207 12							
L							28	1.181 11							
21		12	10	10	12		30	1.170 10							
							32	1.166 09							
17				D			34	1.131 08							
L							36	1.085 07							
13			12	12			38	1.072 06							
							40	1.050 05							
09							42	0.998 04							
L				M			44	0.920 03							
05	L	L	L	L	L	L	46	0.749 02							
	04	08	12	16	20	24	28	32	36	40	44	48	52	48	0.237 01

CORE AVERAGE RADIAL POWER DISTRIBUTION							
RING #	1	2	3	4	5	6	7
REL PW	0.890	1.084	1.113	1.102	1.155	1.145	0.727

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

PAGE 1

CORE PARAMETERS	CLINTON CYCLE 6	SEQUENCE NO 23
POWER MWT 2890.	3D MONICORE	8-JUL-2001 17:58 CALCULATED
POWER MWE 967.	PERIODIC LOG	8-JUL-2001 17:59 PRINTED
FLOW MLB/HR 75.844	CALC RESULTS	CASE ID FMLD1950708205855
FPAPDR 0.824		RESTART FMLD1950708195845
SUBC BTU/LB 23.49	Keff 1.0000	LPRM SHAPE - FULL CORE
PR PSIA 1027.9	XE WORTH % -2.52	LOAD LINE SUMMARY
CORE MWD/sT 20850.8	XE/RATED 1.00	CORE POWER 99.9%
CYCLE MWD/sT 8741.6		CORE FLOW 89.8%
MCPR 1.236		LOAD LINE 107.2%

CORRECTION FACTOR: MFLCPR= 1.000 MFLPD= 1.000 MAPRAT= 0.999
 OPTION: ARTS DUAL LOOP MANUAL FLOW MCPRLIM= 1.240

MOST LIMITING LOCATIONS (NON-SYMMETRIC)							
MFLCPR	LOC	MFLPD	LOC	MAPRAT	LOC	PCRAT	LOC
1.003	37-28	1.002	17-22-18	0.821	7-28- 5	0.798	41-28-16
1.001	39-26	0.912	7-28- 5	0.817	15-30-16	0.798	19-28-16
0.996	41-28	0.912	41-28-16	0.817	11-22-13	0.797	7-28- 5
0.973	11-28	0.902	19-28-16	0.816	19-26-16	0.791	39-22-20
0.940	13-32	0.896	15-38-18	0.813	19-30-15	0.782	9-22-13
0.939	9-26	0.895	21-26-16	0.803	7-26-12	0.779	11-20-13
0.937	11-20	0.893	17-26-16	0.802	9-36-13	0.779	17-26-16
0.930	39-22	0.889	9-22-13	0.798	11-30-11	0.777	11-28-15
0.927	7-28	0.889	11-20-13	0.796	9-26- 5	0.776	13-32-16
0.923	9-22	0.888	13-32-16	0.795	39-22-20	0.774	47-26-12

SEQ. B-2	C=MFLCPR	D=MFLPD	M=MAPRAT	P=PCRAT	*=MULTIPLE	CORE AVE AXIAL							
						NOTCH	REL PW	LOC					
53						00	0.238	25					
						02	0.446	24					
						04	0.804	23					
49						06	0.963	22					
L						08	1.056	21					
45		12	12			10	1.158	20					
				P		12	1.191	19					
41						14	1.163	18					
L						16	1.182	17					
37	12	10	C 10	12		18	1.220	16					
						20	1.215	15					
33						22	1.187	14					
L						24	1.212	13					
29						26	1.207	12					
						28	1.181	11					
25						30	1.170	10					
L						32	1.166	09					
21	12	10	10	12		34	1.131	08					
						36	1.085	07					
17		D				38	1.072	06					
L						40	1.050	05					
13		12	12			42	0.998	04					
						44	0.920	03					
09						46	0.749	02					
L			M			48	0.237	01					
05	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	0.890	1.084	1.113	1.102	1.155	1.145	0.727

CLINTON POWER STATION
 NRC INITIAL LICENSE EXAM 2001-01
 SRO ADMINISTRATIVE JPM

CLINTON CYCLE 6

INSTRUMENT READINGS/STATUS
 CALIBRATED LPRM READINGS

SEQUENCE NO 23
 8-JUL-2001 17:58 CALCULATED
 8-JUL-2001 17:59 PRINTED
 CASE ID FMLD1950708205855
 LPRM SHAPE - FULL CORE

47D	40.1	49.8	55.7	45.9	30.2
C	57.0	59.8	60.3	64.5	43.0
B	61.2	63.6	60.9	69.2	41.9
A	51.1	54.9	49.5	63.0	27.7

OF TIPS REJECTED: 1

39D	35.4	51.3	58.4	61.1	57.5	46.0
C	55.8	62.7	60.3	59.6	66.5	67.9
B	60.0	65.2	60.7	57.0	66.7	70.2
A	52.7	61.1	50.4	44.4	54.7	63.8

FAILED SENSORS:
 LPRM (2 SIGNAL FAILED)
 615A 3815D
 LPRM (0 PANACEA REJECTED)
 OTHER SENSORS (0 TOTAL)

31D	39.9	51.6	55.8	56.0C	55.7	48.5
C	63.7	71.1	68.3	63.1	72.6P	70.4
B	69.6	71.2	66.7	59.2	72.9	73.4
A	67.6M	69.0	61.1	45.4	71.1	71.8

SUB RODS
 NONE

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

23D	40.0	54.3	58.1	57.9	59.5	48.0
C	62.2	67.3D	63.7	59.2	66.8	69.0
B	67.1	67.1	61.4	56.9	66.6	71.1
A	66.5	58.6	48.7	44.2	55.6	66.1

15D	28.5	46.2	55.5	57.2	0.0	39.4
C	42.4	63.6	62.8	59.1	65.4	59.1
B	43.2	68.6	61.9	57.4	67.6	62.2
A	0.0	61.7	49.9	44.3	64.3	50.4

07D	29.1	39.3	40.7	36.6
C	41.4	58.6	56.6	54.5
B	42.3	64.8	61.8	58.3
A	31.2	57.2	55.6	48.4

06 14 22 30 38 46

CORE SUMMARY

CORE POWER	99.9%	CALC SUB FLOW	91.3%	DP MEAS PSI	15.52
CORE FLOW	89.8%	OPER SUB FLOW	-1.2%	DP CALC PSI	20.52
LOAD LINE	107.2%	FLOW BASIS	MEAS	FEEDWTR FLOW MLB/HR	12.35

APRM CALIBRATION

	A	B	C	D
READING	100.4	100.6	100.2	100.2
AGAF	0.994	0.992	0.997	0.997

TIP RUNS RECOMMENDED

STRINGS: NONE

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.2

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

Not Applicable

TASK STANDARDS:

- CPS 9011.01 restoration section has been completed.
- Misaligned control rod has been identified.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

Marked up copy of CPS 9011.01 completed up to step 8.3.
Copy of an OD-7 Option 2, OD-7 Option 4 and an Official 3D Case.

PROCEDURAL/REFERENCES:

CPS 9011.01 Control Rod/Position Indication Operability

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.
Provide initial OD-7 and surveillance after reading the initiating cue.

INITIAL CONDITIONS AND INITIATING CUE:

The plant is operating at 100% power The A RO has completed CPS 9011.01 Control Rod/Position Indication Operability for the weekly surveillance with the exception of the restoration section. You have just relieved the A RO and are directed to complete the restoration section. Report when task is complete.

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.2

REVISION: 00

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. Obtain final PMS Control Rod Position printout:
OD-7 Option 2, OD-7 Option 4, or
Official 3D Case.

STANDARD: Printout demanded.

CUE: Give operator the OD-7 Option 2, OD-7 Option 4, or Official 3D Case when requested.

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.2

REVISION: 00

- *2. Compare the initial and final Control Rod Position printouts to verify proper rod positions.**

STANDARD: Operator performs review and identifies that rod 36-29 is at position 6 instead of position 4.

CUE:

COMMENTS:

SAT

UNSAT

- 3. Notify the SM/CRS that rod 36-29 is at position 6 instead of position 4.**

STANDARD: SM/CRS is notified

CUE:

COMMENTS:

SAT

UNSAT

STOP TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.2

REVISION: 00

K/A REFERENCE NUMBERS

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>Importance Rating</u>	
		<u>RO</u>	<u>SRO</u>
GENERIC	2.2.12	3.0	3.4

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

INITIATING CUE

The plant is operating at 100% power The A RO has completed CPS 9011.01 Control Rod/Position Indication Operability for the weekly surveillance with the exception of the restoration section. You have just relieved the A RO and are directed to complete the restoration section. Report when task is complete.

CONTROL ROD/POSITION INDICATION OPERABILITY

SCOPE OF REVISION:

- Incorporated PAC 0407-97: Editorial typo. Rev marks not retained.
- Format/Organizational title updates, placekeeping aid enhancements, section 5.1 updated to include annunciator impact per 1005.01.
- CR1-98-02-110 (MLSR Project):
 Incorporated performance criteria and credit for
 ITS SR 3.9.5.1 MODE 5 control rod position checks.
- Documentation content of canceled CPS No. 9011.01C001, CONTROL ROD OPERABILITY CHECKLIST incorporated into body of this procedure.
- Incorporated PAC 0502-99, PDRs 99-0906 and 00-0298.

CONTINUOUS USE

ORIGINATOR: *Thomas J. Landin*

CLASS CODE: *SNNN*

ITR: *K. Zipprich*

APPROVAL DATE: *SEP 16 1998*

CURRENT CHANGES TO GENERAL REVISION

	Change #	Date	List of Affected Pages
1	27a	02/21/01	1,3,4,6
2			
3			
4			
5			

c 1.0

PURPOSE

Provide instructions for verifying control rod insertion capability by inserting each applicable PARTIALLY or FULLY withdrawn control rod one notch and observing that the control rod moves, thereby ensuring the control rod is not stuck and is free to insert on a SCRAM.

Instructions are also provided to return the control rods to their original positions to verify each applicable control rod is operable and that the position indication for each applicable control rod is operable.

This surveillance satisfies ITS SR requirements:

- 3.1.3.2, Insert each FULLY withdrawn control rod one notch (7 days)
- 3.1.3.3, Insert each PARTIALLY withdrawn control rod one notch (31 days)
- 3.9.5.1, Insert each withdrawn control rod one notch (7 days - MODE 5)

2.0

DISCUSSION/DEFINITIONS

c 2.1

FREQUENCY

2.1.1

Normal Frequency (MODES 1, 2):

7 Days - for FULLY withdrawn control rods with THERMAL POWER > LPSP of the RPCS

31 Days - for PARTIALLY withdrawn control rods with THERMAL POWER > LPSP of the RPCS

2.1.2

Other Triggers:

- a) Within 24 hours from discovery of any withdrawn control rod that is stuck (will not insert by either CRD drive water or scram pressure) - for all control rods either PARTIALLY or FULLY withdrawn, concurrent with THERMAL Power > the LPSP of the RPCS.
- b) MODE 5 when control rod withdrawn triggered via CPS No. 9000.01D002, CONTROL ROOM OPERATOR SURVEILLANCE LOG - MODE 4,5 DATA SHEET (7 day frequency).

2.2

Individual sections or an individual step or individual steps within a section of this procedure may be performed independently for PMT or other maintenance activities. Those steps within a section that are not performed should be marked N/A. When only parts of a section are performed, it is the responsibility of the SM/CRS and the performer to ensure that all necessary prerequisites, precautions and limitations are met for those steps that

will be performed. Additionally, the impact of NOT performing the remaining steps must also be understood.

2.3

All applicable control rods (control rods not required to have their directional control valves disarmed electrically or hydraulically) will be moved at least one notch to verify proper rod motion and position indication response. Control rod exercising should be performed by a single notch insertion and single notch withdrawal, in as short a time as possible.

3.0 RESPONSIBILITY

Operations Department Head is responsible for the implementation of this procedure.

4.0 PRECAUTIONS

4.1 Plant evolutions which may result in reactivity changes should be avoided during performance of this surveillance.

4.2 Document control rod movement per CPS No. 9000.09, CPS CONTROL ROD MANIPULATION LOGS.

5.0 PREREQUISITES Initials

5.1 In conjunction with the SM/CRS, review the following impact statements to determine required plant status to perform this test:

OPERABILITY IMPACT:

ITS LCO 3.1.3 - Control Rod Operability

SYSTEMS AFFECTED:

AFFECTED ANNUNCIATORS AND COMPUTER POINTS: None

RPS TRIP: N/A

CRVICS ISOLATION: N/A

REQUIRED OPERABLE CHANNELS: N/A

PLANT/SYSTEM CONDITIONS REQUIRED TO CONDUCT TEST

When in MODES 1, 2: Power > low power set point (LPSP) of the Rod Pattern Control System (RPCS).

When in MODES 1, 2: For control rods not FULLY withdrawn, MAPRAT \leq 0.96. If MAPRAT > 0.96 a power reduction will be required prior to testing control rods that are not FULLY withdrawn.

COINCIDENT CHANNELS TO PREVENT ACTUATION: N/A

MM / DL
SM/CRS / Test Performer

- ① 5.2 MODE 1, 2: Reactor power (> LPSP). 100 % DL
[N/A when in MODE 5.]
 - ① 5.3 SM/CRS permission to perform this surveillance. WCM
SM/CRS
- XX:XX / XX/XX/XX
Time/Date

6.0 LIMITATIONS

- 6.1 IF A control rod (or gang) is found out of sequence,
THEN Enter CPS No. 4007.02, INADVERTENT ROD MOVEMENT.
- 6.2 In the event of accidental insertion of more than one notch, withdrawal should be by single notch to avoid any possible over-notching on the withdrawal.
- ① 6.3 MODEs 1, 2: MAPRAT shall be ≤ 0.96 when exercising PARTIALLY withdrawn control rods. This limitation does not apply to FULLY withdrawn control rods.
- ① c 6.4 In order to maintain Rod Withdraw Limiter operability for partially withdrawn rods, ensure that a control rod that has been inserted is deselected and reselected prior to withdrawing that rod. When finished with rod movement, all control rods shall be deselected.

7.0 MATERIALS AND/OR TEST EQUIPMENT - None

8.0 PROCEDURE
Initials

- ① 8.1 Obtain a Plant Monitoring System (PMS) Control Rod Position printout, using either: OD-7 Option 2, OD-7 Option 4, or Official 3D Case. DL
- ① 8.1.1 From the OD-7 edit or Official 3D Case, determine which control rods are not required to be tested because they are not withdrawn. DL
- 8.1.2 Identify any control rods which are disarmed. DL
- 8.1.3 Identify any control rods which are PARTIALLY withdrawn. DL

NOTE

When exercising PARTIALLY withdrawn rods during the monthly test, a "P/" should be used before initials to differentiate between partially withdrawn and fully withdrawn rods.

In this manner, the MODE 1, 2 requirement to limit MAPRAT ≤ 0.96 can be more readily determined.

- 8.2.3 Withdraw the selected rod(s) one notch to original position. X
Place Keeping Aid
- a) Observe proper rod position indication tracking to the original rod position. X
Place Keeping Aid
 - b) Check off the selected rod(s) after the rod(s) is tested by initialing the rod(s). [Document on CORE MAP] X
Place Keeping Aid
- 8.2.4 Repeat steps 8.2.2 and 8.2.3 for each FULLY (PARTIALLY) withdrawn control rod. X
Place Keeping Aid

8.3 RESTORATION Initials

- ① 8.3.1 Obtain a PMS Control Rod Position printout: OD-7 Option 2, OD-7 Option 4, or Official 3D Case. _____
- 8.3.2 Compare the initial and final Control Rod Position printouts to verify proper rod positions. _____
- ① 8.3.3 Notify the SM/CRS of the completion of this test. _____

Time/Date

9.0 ACCEPTANCE CRITERIA

- 9.1 Operability Requirements - Failure to meet the Acceptance Criteria shall constitute a failure to comply with the applicable LCO. ITS should be immediately reviewed to identify Action Statements needed for implementation. Refer to Supplemental Review Sheet for applicable LCOs.
- 9.1.1 All withdrawn control rods not required to have their directional control valves disarmed electrically or hydraulically are inserted at least 1 notch.
- 9.1.2 The indicated control rod position changes during movement of the Control Rod Drive.
- 9.2 Other Requirements - None

10.0 FINAL CONDITIONS

The control rods are returned to their original positions.

11.0 REFERENCES

- 11.1 CPS No. 4007.02, INADVERTENT ROD MOVEMENT
- 11.2 CPS No. 9000.01D002, CONTROL ROOM OPERATOR SURVEILLANCE LOG - MODE 4,5 DATA SHEET
- 11.3 CPS No. 9000.09, CPS CONTROL ROD MANIPULATION LOGS
- c 11.4 ITS SR 3.1.3.2, SR 3.1.3.3, SR 3.9.5.1 (2.1)
- 11.5 USAR 3.1.2.3.2.1, 4.6.3.1.1.5
- 11.6 GE Control Rod Drive Design Spec Data Sheet 22A5395 AE
- 11.7 GE Letter GGJ-88-100 dated 7-29-88
- ① c 11.8 CR 1-99-04-097 (6.4)

12.0 APPENDICES - None① 13.0 DOCUMENTS - None

CORE MAP

		<u>DL</u> 16-53	<u>DL</u> 20-53	<u>DL</u> 24-53	<u>DL</u> 28-53	<u>DL</u> 32-53	<u>DL</u> 36-53	<u>DL</u> 40-53					
		<u>DL</u> 12-49	<u>DL</u> 16-49	<u>DL</u> 20-49	<u>DL</u> 24-49	<u>DL</u> 28-49	<u>DL</u> 32-49	<u>DL</u> 36-49	<u>DL</u> 40-49	<u>DL</u> 44-49			
	<u>DL</u> 08-45	<u>DL</u> 12-45	<u>DL</u> 16-45	<u>DL</u> 20-45	<u>DL</u> 24-45	<u>DL</u> 28-45	<u>DL</u> 32-45	<u>DL</u> 36-45	<u>DL</u> 40-45	<u>DL</u> 44-45	<u>DL</u> 48-45		
<u>DL</u> 04-41	<u>DL</u> 08-41	<u>DL</u> 12-41	<u>DL</u> 16-41	<u>DL</u> 20-41	<u>DL</u> 24-41	<u>DL</u> 28-41	<u>DL</u> 32-41	<u>DL</u> 36-41	<u>DL</u> 40-41	<u>DL</u> 44-41	<u>DL</u> 48-41	<u>DL</u> 52-41	
<u>DL</u> 04-37	<u>DL</u> 08-37	<u>DL</u> 12-37	<u>DL</u> 16-37	N/A 20-37	<u>DL</u> 24-37	N/A 28-37	<u>DL</u> 32-37	N/A 36-37	<u>DL</u> 40-37	<u>DL</u> 44-37	<u>DL</u> 48-37	<u>DL</u> 52-37	
<u>DL</u> 04-33	<u>DL</u> 08-33	<u>DL</u> 12-33	<u>DL</u> 16-33	<u>DL</u> 20-33	<u>DL</u> 24-33	<u>DL</u> 28-33	<u>DL</u> 32-33	<u>DL</u> 36-33	<u>DL</u> 40-33	<u>DL</u> 44-33	<u>DL</u> 48-33	<u>DL</u> 52-33	
<u>DL</u> 04-29	<u>DL</u> 08-29	<u>DL</u> 12-29	<u>DL</u> 16-29	N/A 20-29	<u>DL</u> 24-29	<u>DL</u> 28-29	<u>DL</u> 32-29	N/A 36-29	<u>DL</u> 40-29	<u>DL</u> 44-29	<u>DL</u> 48-29	<u>DL</u> 52-29	
<u>DL</u> 04-25	<u>DL</u> 08-25	<u>DL</u> 12-25	<u>DL</u> 16-25	<u>DL</u> 20-25	<u>DL</u> 24-25	<u>DL</u> 28-25	<u>DL</u> 32-25	<u>DL</u> 36-25	<u>DL</u> 40-25	<u>DL</u> 44-25	<u>DL</u> 48-25	<u>DL</u> 52-25	
<u>DL</u> 04-21	<u>DL</u> 08-21	<u>DL</u> 12-21	<u>DL</u> 16-21	N/A 20-21	<u>DL</u> 24-21	N/A 28-21	<u>DL</u> 32-21	N/A 36-21	<u>DL</u> 40-21	<u>DL</u> 44-21	<u>DL</u> 48-21	<u>DL</u> 52-21	
<u>DL</u> 04-17	<u>DL</u> 08-17	<u>DL</u> 12-17	<u>DL</u> 16-17	<u>DL</u> 20-17	<u>DL</u> 24-17	<u>DL</u> 28-17	<u>DL</u> 32-17	<u>DL</u> 36-17	<u>DL</u> 40-17	<u>DL</u> 44-17	<u>DL</u> 48-17	<u>DL</u> 52-17	
	<u>DL</u> 08-13	<u>DL</u> 12-13	<u>DL</u> 16-13	<u>DL</u> 20-13	<u>DL</u> 24-13	<u>DL</u> 28-13	<u>DL</u> 32-13	<u>DL</u> 36-13	<u>DL</u> 40-13	<u>DL</u> 44-13	<u>DL</u> 48-13		
		<u>DL</u> 12-09	<u>DL</u> 16-09	<u>DL</u> 20-09	<u>DL</u> 24-09	<u>DL</u> 28-09	<u>DL</u> 32-09	<u>DL</u> 36-09	<u>DL</u> 40-09	<u>DL</u> 44-09			
			<u>DL</u> 16-05	<u>DL</u> 20-05	<u>DL</u> 24-05	<u>DL</u> 28-05	<u>DL</u> 32-05	<u>DL</u> 36-05	<u>DL</u> 40-05				

CONTROL ROD OPERABILITY CHECKLIST

CORRECTIVE ACTION TAKEN

9.1 ACCEPTANCE CRITERIA

ITS LCOs: 3.1.3 3.9.5

ORM ORs: None

ODCM ORs: None

As applicable:

Initiated Condition Report _____
(yes/no)

Initiated Maintenance Request (MR) No. _____

9.2 ACCEPTANCE CRITERIA

As applicable:

Initiated Condition Report _____
(yes/no)

Initiated Maintenance Request (MR) No. _____

COMMENTS/DEFICIENCIES

REVIEW AND APPROVAL

Surveillance Coordinator _____

(Signature)

(Date)

Initial Positions

OD-7, CONTROL ROD NOTCH POSITIONS, NEW SCAN (Option 2)

53				48	48	48	48	48	48	48	48		
49			48	48	48	48	48	48	48	48	48	48	
45		48	48	48	48	48	48	48	48	48	48	48	48
41	48	48	48	48	48	48	48	48	48	48	48	48	48
37	48	48	48	48	18	48	4	48	18	48	48	48	48
33	48	48	48	48	48	48	48	48	48	48	48	48	48
29	48	48	48	48	4	48	48	48	4	48	48	48	48
25	48	48	48	48	48	48	48	48	48	48	48	48	48
21	48	48	48	48	18	48	4	48	18	48	48	48	48
17	48	48	48	48	48	48	48	48	48	48	48	48	48
13		48	48	48	48	48	48	48	48	48	48	48	48
9			48	48	48	48	48	48	48	48	48	48	
5				48	48	48	48	48	48	48	48		
	4	8	12	16	20	24	28	32	36	40	44	48	52

Final Positions

OD-7, CONTROL ROD NOTCH POSITIONS, NEW SCAN (Option 2)

53				48	48	48	48	48	48	48				
49			48	48	48	48	48	48	48	48	48	48		
45		48	48	48	48	48	48	48	48	48	48	48	48	
41	48	48	48	48	48	48	48	48	48	48	48	48	48	
37	48	48	48	48	18	48	4	48	18	48	48	48	48	
33	48	48	48	48	48	48	48	48	48	48	48	48	48	
29	48	48	48	48	4	48	48	48	6	48	48	48	48	
25	48	48	48	48	48	48	48	48	48	48	48	48	48	
21	48	48	48	48	18	48	4	48	18	48	48	48	48	
17	48	48	48	48	48	48	48	48	48	48	48	48	48	
13		48	48	48	48	48	48	48	48	48	48	48		
9			48	48	48	48	48	48	48	48	48	48		
5				48	48	48	48	48	48	48				
		4	8	12	16	20	24	28	32	36	40	44	48	52

CORE PARAMETERS		CLINTON CYCLE 6	SEQUENCE NO 23
POWER MWT	2890.	3D MONICORE	17-JUL-2001 20:00 CALCULATED
POWER MWE	967.	PERIODIC LOG	17-JUL-2001 20:01 PRINTED
FLOW MLB/HR	75.844	CALC RESULTS	CASE ID FMLD1950708205855
FPAPDR	0.824		RESTART FMLD1950708195845
SUBC BTU/LB	23.49	Keff	1.0000
PR PSIA	1027.9	XE WORTH %	-2.52
CORE MWD/ST	20850.8	XE/RATED	1.00
CYCLE MWD/ST	8741.6		
MCPR	1.268		

LOAD LINE SUMMARY
 CORE POWER 99.9%
 CORE FLOW 89.8%
 LOAD LINE 107.2%

CORRECTION FACTOR: MFLCPR= 1.000 MFLPD= 1.000 MAPRAT= 0.999
 OPTION: ARTS DUAL LOOP MANUAL FLOW MCPRLIM= 1.240

MOST LIMITING LOCATIONS (NON-SYMMETRIC)

MFLCPR	LOC	MFLPD	LOC	MAPRAT	LOC	PCRAT	LOC
0.978	37-28	0.912	17-22-18	0.821	7-28- 5	0.798	41-28-16
0.976	39-26	0.912	7-28- 5	0.817	15-30-16	0.798	19-28-16
0.975	41-28	0.912	41-28-16	0.817	11-22-13	0.797	7-28- 5
0.973	11-28	0.902	19-28-16	0.816	19-26-16	0.791	39-22-20
0.940	13-32	0.896	15-38-18	0.813	19-30-15	0.782	9-22-13
0.939	9-26	0.895	21-26-16	0.803	7-26-12	0.779	11-20-13
0.937	11-20	0.893	17-26-16	0.802	9-36-13	0.779	17-26-16
0.930	39-22	0.889	9-22-13	0.798	11-30-11	0.777	11-28-15
0.927	7-28	0.889	11-20-13	0.796	9-26- 5	0.776	13-32-16
0.923	9-22	0.888	13-32-16	0.795	39-22-20	0.774	47-26-12

SEQ.	B-2	C=MFLCPR	D=MFLPD	M=MAPRAT	P=PCRAT	*=MULTIPLE	CORE AVE	AXIAL					
							NOTCH REL PW	LOC					
53							00	0.238 25					
49							02	0.446 24					
L							04	0.804 23					
45							06	0.963 22					
							08	1.056 21					
41				P			10	1.158 20					
L							12	1.191 19					
37		18	C4	18			14	1.163 18					
							16	1.182 17					
33							18	1.220 16					
L							20	1.215 15					
29		4		4			22	1.187 14					
							24	1.212 13					
25							26	1.207 12					
L							28	1.181 11					
21		18	4	18			30	1.170 10					
							32	1.166 09					
17			D				34	1.131 08					
L							36	1.085 07					
13							38	1.072 06					
							40	1.050 05					
09							42	0.998 04					
L				M			44	0.920 03					
05							46	0.749 02					
L							48	0.237 01					
04	08	12	16	20	24	28	32	36	40	44	48	52	

CORE AVERAGE RADIAL POWER DISTRIBUTION

RING #	1	2	3	4	5	6	7
REL PW	0.890	1.084	1.113	1.102	1.155	1.145	0.727

CLINTON CYCLE 6

INSTRUMENT READINGS/STATUS
CALIBRATED LPRM READINGS

SEQUENCE NO 23
17-JUL-2001 20:00 CALCULATED
17-JUL-2001 20:01 PRINTED
CASE ID FMLD1950708205855
LPRM SHAPE - FULL CORE

47D	40.1	49.8	55.7	45.9	30.2
C	57.0	59.8	60.3	64.5	43.0
B	61.2	63.6	60.9	69.2	41.9
A	51.1	54.9	49.5	63.0	27.7

OF TIPS REJECTED: 1

39D	35.4	51.3	58.4	61.1	57.5	46.0
C	55.8	62.7	60.3	59.6	66.5	67.9
B	60.0	65.2	60.7	57.0	66.7	70.2
A	52.7	61.1	50.4	44.4	54.7	63.8

FAILED SENSORS:
LPRM (2 SIGNAL FAILED)
615A 3815D
LPRM (0 PANACEA REJECTED)
OTHER SENSORS (0 TOTAL)
SUB RODS
NONE

31D	39.9	51.6	55.8	56.0C	55.7	48.5
C	63.7	71.1	68.3	63.1	72.6P	70.4
B	69.6	71.2	66.7	59.2	72.9	73.4
A	67.6M	69.0	61.1	45.4	71.1	71.8

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

23D	40.0	54.3	58.1	57.9	59.5	48.0
C	62.2	67.3D	63.7	59.2	66.8	69.0
B	67.1	67.1	61.4	56.9	66.6	71.1
A	66.5	58.6	48.7	44.2	55.6	66.1

15D	28.5	46.2	55.5	57.2	0.0	39.4
C	42.4	63.6	62.8	59.1	65.4	59.1
B	43.2	68.6	61.9	57.4	67.6	62.2
A	0.0	61.7	49.9	44.3	64.3	50.4

07D	29.1	39.3	40.7	36.6
C	41.4	58.6	56.6	54.5
B	42.3	64.8	61.8	58.3
A	31.2	57.2	55.6	48.4

06 14 22 30 38 46

CORE SUMMARY

CORE POWER	99.9%	CALC SUB FLOW	91.3%	DP MEAS PSI	15.52
CORE FLOW	89.8%	OPER SUB FLOW	-1.2%	DP CALC PSI	20.52
LOAD LINE	107.2%	FLOW BASIS	MEAS	FEEDWTR FLOW MLB/HR	12.35

APRM CALIBRATION

	A	B	C	D
READING	100.4	100.6	100.2	100.2
AGAF	0.994	0.992	0.997	0.997

TIP RUNS RECOMMENDED
STRINGS: NONE

CORE PARAMETERS

POWER MWT 2890.
 POWER MWE 967.
 FLOW MLB/HR 75.844
 FPAPDR 0.824
 SUBC BTU/LB 23.49
 PR PSIA 1027.9
 CORE MWD/sT 20850.8
 CYCLE MWD/sT 8741.6
 MCPR 1.268

CLINTON CYCLE 6
 3D MONICORE
 PERIODIC LOG

SEQUENCE NO 23
 17-JUL-2001 20:58 CALCULATED
 17-JUL-2001 20:59 PRINTED
 CASE ID FMLD1950708205855
 RESTART FMLD1950708195845
 LPRM SHAPE - FULL CORE

CALC RESULTS

Keff 1.0000
 XE WORTH % -2.52
 XE/RATED 1.00

LOAD LINE SUMMARY

CORE POWER 99.9%
 CORE FLOW 89.8%
 LOAD LINE 107.2%

CORRECTION FACTOR: MFLCPR= 1.000 MFLPD= 1.000 MAPRAT= 0.999
 OPTION: ARTS DUAL LOOP MANUAL FLOW MCPRLIM= 1.240

MOST LIMITING LOCATIONS (NON-SYMMETRIC)

MFLCPR	LOC	MFLPD	LOC	MAPRAT	LOC	PCRAT	LOC
0.978	37-28	0.912	17-22-18	0.821	7-28- 5	0.798	41-28-16
0.976	39-26	0.912	7-28- 5	0.817	15-30-16	0.798	19-28-16
0.975	41-28	0.912	41-28-16	0.817	11-22-13	0.797	7-28- 5
0.973	11-28	0.902	19-28-16	0.816	19-26-16	0.791	39-22-20
0.940	13-32	0.896	15-38-18	0.813	19-30-15	0.782	9-22-13
0.939	9-26	0.895	21-26-16	0.803	7-26-12	0.779	11-20-13
0.937	11-20	0.893	17-26-16	0.802	9-36-13	0.779	17-26-16
0.930	39-22	0.889	9-22-13	0.798	11-30-11	0.777	11-28-15
0.927	7-28	0.889	11-20-13	0.796	9-26- 5	0.776	13-32-16
0.923	9-22	0.888	13-32-16	0.795	39-22-20	0.774	47-26-12

SEQ.	B-2	C=MFLCPR	D=MFLPD	M=MAPRAT	P=PCRAT	*=MULTIPLE	CORE AVE	AXIAL								
							NOTCH REL PW	LOC								
53							00	0.238 25								
49							02	0.446 24								
L							04	0.804 23								
45							06	0.963 22								
							08	1.056 21								
41			P				10	1.158 20								
L							12	1.191 19								
37		18	C4	18			14	1.163 18								
							16	1.182 17								
33							18	1.220 16								
L							20	1.215 15								
29		4		6			22	1.187 14								
							24	1.212 13								
25							26	1.207 12								
L							28	1.181 11								
21		18	4	18			30	1.170 10								
							32	1.166 09								
17			D				34	1.131 08								
L							36	1.085 07								
13							38	1.072 06								
							40	1.050 05								
09							42	0.998 04								
L			M				44	0.920 03								
05	L	L	L	L	L	L	46	0.749 02								
	04	08	12	16	20	24	28	32	36	40	44	48	52	48	0.237	01

CORE AVERAGE RADIAL POWER DISTRIBUTION

RING #	1	2	3	4	5	6	7
REL PW	0.890	1.084	1.113	1.102	1.155	1.145	0.727

SEQUENCE NO 23
17-JUL-2001 20:58 CALCULATED
17-JUL-2001 20:59 PRINTED
CASE ID FMLD1950708205855
LPRM SHAPE - FULL CORE

47D	40.1	49.8	55.7	45.9	30.2
C	57.0	59.8	60.3	64.5	43.0
B	61.2	63.6	60.9	69.2	41.9
A	51.1	54.9	49.5	63.0	27.7

OF TIPS REJECTED: 1

39D	35.4	51.3	58.4	61.1	57.5	46.0
C	55.8	62.7	60.3	59.6	66.5	67.9
B	60.0	65.2	60.7	57.0	66.7	70.2
A	52.7	61.1	50.4	44.4	54.7	63.8

FAILED SENSORS:
LPRM (2 SIGNAL FAILED)
615A 3815D
LPRM (0 PANACEA REJECTED)
OTHER SENSORS (0 TOTAL)
SUB RODS
NONE

31D	39.9	51.6	55.8	56.0C	55.7	48.5
C	63.7	71.1	68.3	63.1	72.6P	70.4
B	69.6	71.2	66.7	59.2	72.9	73.4
A	67.6M	69.0	61.1	45.4	71.1	71.8

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

23D	40.0	54.3	58.1	57.9	59.5	48.0
C	62.2	67.3D	63.7	59.2	66.8	69.0
B	67.1	67.1	61.4	56.9	66.6	71.1
A	66.5	58.6	48.7	44.2	55.6	66.1

15D	28.5	46.2	55.5	57.2	0.0	39.4
C	42.4	63.6	62.8	59.1	65.4	59.1
B	43.2	68.6	61.9	57.4	67.6	62.2
A	0.0	61.7	49.9	44.3	64.3	50.4

07D	29.1	39.3	40.7	36.6
C	41.4	58.6	56.6	54.5
B	42.3	64.8	61.8	58.3
A	31.2	57.2	55.6	48.4

06 14 22 30 38 46

CORE SUMMARY

CORE POWER	99.9%	CALC SUB FLOW	91.3%	DP MEAS PSI	15.52
CORE FLOW	89.8%	OPER SUB FLOW	-1.2%	DP CALC PSI	20.52
LOAD LINE	107.2%	FLOW BASIS	MEAS	FEEDWTR FLOW MLB/HR	12.35

APRM CALIBRATION

	A	B	C	D
READING	100.4	100.6	100.2	100.2
AGAF	0.994	0.992	0.997	0.997

TIP RUNS RECOMMENDED

STRINGS: NONE

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

TASK TITLE: Determine expected dose operator would receive while performing an LLRT.

TASK NUMBER: 013299C003

APPLICABILITY: RO SRO

TIME CRITICAL: YES NO FAULTED: YES NO

TRAINEE

DATE

PASS FAIL

EVALUATOR

COMMENTS: _____

METHOD OF TESTING:

Simulated Performance _____ Actual Performance

Classroom Simulator _____ Plant _____

APPROXIMATE TIME FOR COMPLETION: 15 minutes

Prepared/Revised by: _____ Date: _____

Approved by: _____ Date: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

Not Applicable

TASK STANDARDS:

- Expected dose is determined.
- Determination is made that administrative dose will be exceeded.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

Radiation survey map of the Containment steam tunnel.
CPS 9861.02D032, LLRT DATA SHEET FOR 1MC061 – RWCU RETURN
CPS 3303.01V001, REACTOR WATER CLEANUP VALVE LINEUP

PROCEDURAL/REFERENCES:

CPS 1024.15 OCCUPATIONAL RADIATION EXPOSURE CONTROL AND MONITORING

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

INITIAL CONDITIONS AND INITIATING CUE:

To assist in the performance of a retest for RWCU LLRT (IMC-061) you have been asked to perform valve operations and other tasks in the Containment Steam Tunnel. The tasks will be performed approximately 12 inches from 1G33-F053, and are estimated to take ½ hour to complete.

Determine the expected dose you would receive while completing these tasks, and then determine if the tasks can be completed without exceeding your administrative dose limit. Vocalize your thought process and report when your task is complete.

Your current annual dose is 1937 mrem.

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

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 Containment Steam Tunnel.**

STANDARD: Locates survey map of Containment Steam Tunnel.

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

COMMENTS: Survey maps may be available in the following locations:

- Service Building entrance to the RCA
- R & S line near the Maintenance Area
- Radiation Protection Office
- Access Control Point

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

***2. Determine 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:

COMMENTS:

SAT _____ UNSAT _____

***3. Calculates expected dose.**

STANDARD: Expected dose calculated to be:
- 100 mrem if the 200 mr/hr rate is used.
- 75 mrem if the 150 mr/hr rate is used.

CUE:

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

***4. Determine if Administrative Dose Limit would be exceeded.**

STANDARD: Determines that administrative dose would be exceeded.
- If the 200 mr/hr rate is used total dose would be 2037.
- If the 150 mr/hr rate is used total dose would be 2012.

CUE:

COMMENTS: Per the cue: current annual dose is 1937 mrem.
Clinton administrative dose limit is 2000 mrem/yr.

SAT _____ UNSAT _____

STOP TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

K/A REFERENCE NUMBERS

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>Importance Rating</u>	
		<u>RO</u>	<u>SRO</u>
GENERIC	2.3.10	2.9	3.3

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

TASK TITLE: Make a plant announcement for FIRE in the Paint and Oil
Storage Room with area evacuation.

TASK NUMBER: 011285C501

APPLICABILITY: RO SRO

TIME CRITICAL: YES NO FAULTED: YES NO

TRAINEE

DATE

PASS FAIL

EVALUATOR

COMMENTS:

METHOD OF TESTING:

Simulated Performance Actual Performance

Classroom Simulator Plant

APPROXIMATE TIME FOR COMPLETION: 7 minutes

Prepared/Revised by: _____ Date: _____

Approved by: _____ Date: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

100% IC (IC-1 or comparable)

TASK STANDARDS:

The Fire Alarm has been sounded and the announcements made per CPS 1893.04 FIRE FIGHTING.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

None

PROCEDURAL/REFERENCES:

CPS 1893.04, FIRE FIGHTING

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.

INITIAL CONDITIONS AND INITIATING CUE:

The plant is operating at 100% power. You are the 'B' Reactor Operator. You have just received a call stating that there is a fire in the Paint and Oil Storage Room. Perform the Control Room actions. Report when you have completed the task.

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

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. **Inform Shift Management of the FIRE.**

STANDARD: The Control Room Supervisor or the Shift Manager has been notified.

CUE: Acknowledge the report as Shift Management.

COMMENTS:

SAT UNSAT

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

2. IF a fire alarm occurs (red flashing strobe light) in MCR panel H13-P661, H13-P662 or the associated subfloor areas AND it cannot be immediately confirmed that a fire does not exist, THEN perform the following:
- For H13-P661 or associated subfloor area, place the Division 1 SRV handswitches in the OFF position.
 - For H13-P662 or associated subfloor area, place the Division 2 SRV handswitches in the OFF position.
 - Refer to Technical Specification LCO 3.3.6.5.

STANDARD: No action required, fire is not in MCR panel H13-P661, H13-P662 or associated subfloor areas.

CUE:

COMMENTS: Cue states that the fire is in the Paint and Oil Storage Room.

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

- *3. Sound the fire alarm and continue to sound the alarm at regular intervals until the fire is extinguished.**

STANDARD: The fire alarm is initiated and silenced prior to making the Public Address Announcement.

CUE:

COMMENTS: The fire alarm is initiated by depressing the fire alarm pushbutton on the Gaitronics Alarm Panel located on the desk in the Main Control Room.

SAT _____ UNSAT _____

- *4. Announce over the Public Address System:**

Attention All Personnel!

Attention All Personnel!

There is a fire in the Turbine Oil Storage Room!

All personnel shall keep clear of the affected areas!

Fire Brigade operations and communications will be on the operations radio frequency and gaitronics; this frequency and gaitronics are now assigned for emergency fire ground use.

STANDARD: Announcement is made using a Gaitronics phone in the Main Control Room.

CUE:

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

***5. Announce over the operations radio channel:**

Attention All Personnel!

Attention All Personnel!

There is a fire in the Turbine Oil Storage Room!

All personnel shall keep clear of the affected areas!

Fire Brigade operations and communications will be on the operations radio frequency and gaitronics; this frequency and gaitronics are now assigned for emergency fire ground use.

STANDARD: Announcement is made using the radio on the desk in the Main Control Room.

CUE:

COMMENTS:

SAT _____ UNSAT _____

6. Any special instructions should also be announced over both communications systems.

STANDARD: Request from the CRS if there are any special instructions that need to be announced.

CUE: Report as the CRS that there are no special instructions to announce at this time.

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

7. Start a fire pump (if one is not running)

STANDARD: Operator reports that he would go back to the Fire Protection Panel and start a Fire Pump.

CUE: Report that Fire Pump has been started.

COMMENTS: If operator did not start Fire Pump, it would automatically start on low header pressure if fire hoses were used.

SAT _____ UNSAT _____

8. Inform RP of any fire on site to evaluate potential radiological hazards.

STANDARD: Operator calls Rp to report the fire and its location.

CUE: Acknowledge report of the fire.

COMMENTS:

SAT _____ UNSAT _____

STOP TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

K/A REFERENCE NUMBERS

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>Importance Rating</u>	
		<u>RO</u>	<u>SRO</u>
GENERIC	2.4.34	2.8	3.5

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
RO ADMINISTRATIVE JPM

INITIATING CUE

The plant is operating at 100% power. You are the 'B' Reactor Operator. You have just received a call stating that there is A fire in the Paint and Oil Storage Room. Perform the Control Room actions. Report when you have completed the task.

Facility: <u>Clinton Power Station</u>		Date of Examination: <u>07/16/01</u>
Exam Level (circle one): RO / <input checked="" type="checkbox"/> SRO		Operating Test No.: <u>2001-01</u>
Administrative Topic/Subject Description		Describe method of evaluation 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations Shift Staffing Requirements	JPM – Determine shift staffing adjustments, actions, and time restraints required due to an operator absence during shift. 2.1.4
	Conduct of Operations Plant Parameter Verification	JPM – Determine if Power, Flow, or Core Thermal Limits have been Exceeded. (Faulted) 2.1.19
A.2	Equipment Control Surveillance Testing	JPM – Review completed CPS 9011.01, "Control Rod/Position Indication Operability" and identify discrepancies. (Faulted) 2.2.12
A.3	Radiation Control Calculating Exposure	JPM – Determine expected dose operator would receive while performing an LLRT and select an operator to prevent exceeding dose limit. 2.3.10
A.4	Emergency Plan Protective Action Recommendation	JPM – Determine an EP Protective Action Recommendation with a subsequent wind direction change. 2.4.44

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

TASK TITLE: Determine shift staffing adjustments, actions, and time constraints required due to an operator absence during shift.

TASK NUMBER: 033299C594

APPLICABILITY: RO SRO

TIME CRITICAL: YES NO FAULTED: YES NO

TRAINEE

DATE

PASS FAIL

EVALUATOR

COMMENTS: _____

METHOD OF TESTING:

Simulated Performance Actual Performance

Classroom Simulator Plant

APPROXIMATE TIME FOR COMPLETION: 11 minutes

Prepared/Revised by: _____ Date: _____

Approved by: _____ Date: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

Not Applicable

TASK STANDARDS:

Shift Staffing adjusted and actions taken to meet minimum shift staffing within the time constraints.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

Current NOMS Shift Staffing Log

PROCEDURAL/REFERENCES:

CPS 1401.05, OPERATOR LOGS & RECORDS, Rev. 7d.

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.

INITIAL CONDITIONS AND INITIATING CUE:

The time is 0930 on a Sunday morning with the plant in Mode 1. Dan Green ('B' Reactor Operator) has just informed you that he is leaving immediately due to a personal emergency. He has given a turnover to Jerry Palmer (Extra Reactor Operator). You are to identify the staffing adjustments that need to be made, recommendations for call-outs, and time constraints. Vocalize your thought process, and report when you have completed the task.

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

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. Obtain a copy of the 'NOMS Shift Roster' to determine current status of shift personnel.**

STANDARD: Reviews log and identifies that extra RO was filling the Fire Brigade Leader position which he no longer is allowed to fill.

CUE:

COMMENTS: The Fire Brigade Leader position is now required to be filled.

May choose to fill the Fire Brigade Leader position from the ranks of the Fire Brigade members who are qualified. This is allowed and would then leave an opened Fire Brigade member position.

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

2 Determines if there are other Fire Brigade Members available on-site.

STANDARD: Contact RP to determine if anybody is available for the Fire Brigade on-site.

CUE: As RP state that there are no other Fire Brigade Members are available.

COMMENTS:

SAT _____ UNSAT _____

**3 DAA
7/14/01
Not covered by
C.1.7.1.1*

**Initiates process for call-out to fill either the Fire Brigade Leader or Fire
Brigade Member position.**

STANDARD: Directs Work Coordination Supervisor (WCS) to initiate call-out for individual.

CUE: Report as the WCS that Tom Woods has been called in, and he is only Fire Brigade
Member qualified.
If clerical staff is requested to make the call-out, report that no clerical staff is
available.

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

***4. Identify time constraint to have all minimum shift staffing positions filled**

STANDARD: Minimum shift staffing positions shall be filled within 2 hours.

CUE:

COMMENTS:

SAT _____ UNSAT _____

***5. Adjust staff positions to ensure all positions are filled within the time constraints.**

STANDARD: Adjusts staff positions to fill the Fire Brigade Leader and Fire Brigade Member positions.

CUE:

COMMENTS: Harry Johnson will need to be moved up to Fire Brigade Leader position and Tom Woods will fill the Fire Brigade Member position.

SAT _____ UNSAT _____

STOP TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.a

REVISION: 00

K/A REFERENCE NUMBERS

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>Importance Rating</u>	
		<u>RO</u>	<u>SRO</u>
GENERIC	2.1.4	2.3	3.4

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

INITIATING CUE

The time is 0930 on a Sunday morning with the plant in Mode 1. Dan Green ('B' Reactor Operator) has just informed you that he is leaving immediately due to a personal emergency. He has given a turnover to Jerry Palmer (Extra Reactor Operator). You are to identify the staffing adjustments that need to be made, recommendations for call-outs, and time constraints. Vocalize your thought process, and report when you have completed the task.

CLINTON POWER STATION
 NRC INITIAL LICENSE EXAM 2001-01
 SRO ADMINISTRATIVE JPM

Sunday, July 15, 2001
Clinton Narrative Log

Day Shift
Shift Roster

	Description	Assigned	Required	Assumed at	Relieved at	Turnover Sheet
1	Shift Manager	SMITH, BILL	Yes	07/15/2001 07:35		
2	Control Room Supervisor	JONES, TIM	Yes	07/15/2001 07:00		
3	Work Coordination Supvr	LYONS, JIM	Yes	07/15/2001 06:47		
4	Shift Technical Advisor	SMITH, BILL	Yes	07/15/2001 07:35		
5	Incident Assessor	LYONS, JIM	Yes	07/15/2001 06:48		
6	A Reactor Operator	WILLIAMS, RICK	Yes	07/15/2001 07:08		
7	B Reactor Operator	GREEN, DAN	Yes	07/15/2001 07:08		
8	Extra Reactor Operator	PALMER, JERRY	No			
9	Group Leader		No			
10	C Area Operator	SAUNDERS, JEFF	Yes	07/15/2001 06:48		
11	D Area Operator	HUDSON, DAN	Yes	07/15/2001 06:43		
12	E Area Operator	CLARK, JERRY	Yes	07/15/2001 06:41		
13	ERO - Communicator	HUDSON, DAN	Yes	07/15/2001 06:48		
14	ERO - NLO	JOHNSON, HARRY	Yes	07/15/2001 06:39		
15	Safe Shutdown Operator	SAUNDERS, JEFF	Yes	07/15/2001 06:43		
16	Fire Brigade Leader	PALMER, JERRY	Yes	07/15/2001 06:41		
17	Fire Brigade Member #1	CLARK, JERRY	Yes	07/15/2001 06:41		
18	Fire Brigade Member #2	JOHNSON, HARRY	Yes	07/15/2001 06:40		
19	Fire Brigade Member #3	REEVES, JACK	Yes	07/15/2001 06:39		
20	Extra Operator #1		No			
21	Extra Operator #2		No			
22	Extra Operator #3		No			
23	Operations Field Supvr		No			

Fire Brigade Leader Qualified

LYONS, JIM
 JOHNSON, HARRY
 PALMER, JERRY
 SAUNDERS, JEFF
 WILLIAMS, RICK

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

TASK TITLE: Determine if Power, Flow or Core Thermal limits have been exceeded - Faulted.

TASK NUMBER: 031345C518

APPLICABILITY: RO SRO

TIME CRITICAL: YES NO FAULTED: YES NO

TRAINEE	DATE
EVALUATOR	PASS <input type="checkbox"/> FAIL <input type="checkbox"/>

COMMENTS:

METHOD OF TESTING:

Simulated Performance Actual Performance

Classroom Simulator Plant

APPROXIMATE TIME FOR COMPLETION: 15 minutes

Prepared/Revised by: _____ Date: _____

Approved by: _____ Date: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

Not Applicable

TASK STANDARDS:

- Perform CPS No. 9820.01 POWER DISTRIBUTION LIMITS with no deviation from the procedure.
- Identifies Highest values of MFLCPR and MFLPD are >1.0.
- Determines required actions requires restoration of limits within 2 hours.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

CPS 9820.01, POWER DISTRIBUTION LIMITS
CPS 9820.01D001, POWER DISTRIBUTION LIMITS DATA SHEET

PROCEDURAL/REFERENCES:

CPS 9820.01, POWER DISTRIBUTION LIMITS
CPS 9820.01D001, POWER DISTRIBUTION LIMITS DATA SHEET

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.

INITIAL CONDITIONS AND INITIATING CUE:

You are directed to perform the daily surveillance CPS 9820.01, POWER DISTRIBUTION LIMITS, and determine any required actions if necessary. Report when the task is complete.

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

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. 5.1 Shift Management Notification

STANDARD: The operator notifies CRS that he is starting the surveillance.

CUE: Acknowledge notification.

COMMENTS:

SAT _____ UNSAT _____

2. 5.2 Verify Core Thermal Power is \geq 25% RTP.

STANDARD: Verifies Core Thermal Power is \geq 25% RTP by checking the 3D Case.

CUE:

COMMENTS: 3D Case has 99.9% Core Thermal Power

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

3. 5.3 Check the applicable entry condition.

STANDARD: The operator determines that the applicable entry condition is Daily Surveillance, checks the appropriate box and initials on CPS 9820.01D001, POWER DISTRIBUTION LIMITS DATA SHEET.

CUE:

COMMENTS: The entry condition was given in the initiating cue.

SAT _____ UNSAT _____

4. 5.4 Verify 2nd character of 3D CASE ID is an "M".

STANDARD: The operator determines that 2nd character of 3D CASE ID is an "M" and initials CPS 9820.01D001.

CUE:

COMMENTS: CASE ID is FMLD1950708205855

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

5. 5.5 Check applicable RR pump status.

STANDARD: Operator would check the RR pump status on DCS, and check the appropriate box on CPS 9820.01D001.

CUE: Cue operator that 2 RR pumps are running.

COMMENTS:

SAT _____ UNSAT _____

6. 5.6 Check applicable 3D Case OPTION line items:

STANDARD: Operator checks the 3D Case and determines that ARTS, DUAL LOOP, and MANUAL FLOW boxes should be checked on CPS 9820.01D001.

CUE:

COMMENTS: This information is located to the right of OPTION on the 3D Case.

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

7. 8.2 From the 3D Case determine the highest MAPRAT value.

Initial CPS 9820.01D001 if MAPRAT \leq 1.0.

STANDARD: The operator determines the highest MAPRAT value is 0.821 and initials CPS 9820.01D001.

CUE:

COMMENTS:

SAT _____ UNSAT _____

*8 8.3 From the core thermal limits calculation obtained in step 8.1, determine the highest MFLCPR value.

Initial CPS 9820.01D001 if MFLCPR \leq 1.0.

STANDARD: Determines that the highest MFLCPR value is 1.003 and does not initial CPS 9820.01D001.

CUE:

COMMENTS: Two locations have MFLCPR $>$ 1.0 (37-28 & 39-26)

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

*9 8.4

From the core thermal limits calculation obtained in step 8.1, determine the highest MFLPD value.

Initial CPS 9820.01D001 if MFLPD \leq 1.0.

STANDARD: The operator determines that the highest value of MFLPD is 1.002 and does not initial CPS 9820.01D001.

CUE:

COMMENTS: MFLPD is $>$ 1.0 at (17-22-18)

SAT _____ UNSAT _____

10. 8.5

Immediately contact SMngt if any of the following conditions occur so that corrective action may be taken in accordance with the appropriate ITS:

1. MAPRAT is $>$ 1.0.
2. MLCPR is $>$ 1.0.
3. MFLPD is $>$ 1.0.

STANDARD: Control Room Supervisor or Shift Manager notified that MFLCPR and MFLPD are out of specification.

CUE:

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

***11. Determines that LCOs 3.2.2 and 3.2.3 action requires restoration of limits within 2 hours.**

STANDARD: Enters LCOs 3.2.2 and 3.2.3

CUE:

COMMENTS:

SAT _____ UNSAT _____

STOP TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.1.b

REVISION: 00

K/A REFERENCE NUMBERS

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>Importance Rating</u>	
		<u>RO</u>	<u>SRO</u>
294000	2.1.19	3.0	3.0
	2.1.25	2.8	3.1

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

INITIATING CUE

You are directed to perform the daily surveillance CPS 9820.01, POWER DISTRIBUTION LIMITS, and determine any required actions if necessary. Report when the task is complete.

CLINTON POWER STATION
 NRC INITIAL LICENSE EXAM 2001-01
 SRO ADMINISTRATIVE JPM

PAGE 2

CLINTON CYCLE 6

INSTRUMENT READINGS/STATUS
 CALIBRATED LPRM READINGS

SEQUENCE NO 23

17-JUL-2001 17:58 CALCULATED

17-JUL-2001 17:59 PRINTED

CASE ID FMLD1950708205855

LPRM SHAPE - FULL CORE

47D	40.1	49.8	55.7	45.9	30.2
C	57.0	59.8	60.3	64.5	43.0
B	61.2	63.6	60.9	69.2	41.9
A	51.1	54.9	49.5	63.0	27.7

OF TIPS REJECTED: 1

39D	35.4	51.3	58.4	61.1	57.5	46.0
C	55.8	62.7	60.3	59.6	66.5	67.9
B	60.0	65.2	60.7	57.0	66.7	70.2
A	52.7	61.1	50.4	44.4	54.7	63.8

FAILED SENSORS:

LPRM (2 SIGNAL FAILED)

615A 3815D

LPRM (0 PANACEA REJECTED)

OTHER SENSORS (0 TOTAL)

SUB RODS

NONE

31D	39.9	51.6	55.8	56.0C	55.7	48.5
C	63.7	71.1	68.3	63.1	72.6P	70.4
B	69.6	71.2	66.7	59.2	72.9	73.4
A	67.6M	69.0	61.1	45.4	71.1	71.8

T = TIP RUN RECOMMENDED

C = MFLCPR LOCATION

M = MAPRAT LOCATION

D = MFLPD LOCATION

P = PCRAT LOCATION

* = MULTIPLE LIMIT

23D	40.0	54.3	58.1	57.9	59.5	48.0
C	62.2	67.3D	63.7	59.2	66.8	69.0
B	67.1	67.1	61.4	56.9	66.6	71.1
A	66.5	58.6	48.7	44.2	55.6	66.1

15D	28.5	46.2	55.5	57.2	0.0	39.4
C	42.4	63.6	62.8	59.1	65.4	59.1
B	43.2	68.6	61.9	57.4	67.6	62.2
A	0.0	61.7	49.9	44.3	64.3	50.4

07D	29.1	39.3	40.7	36.6
C	41.4	58.6	56.6	54.5
B	42.3	64.8	61.8	58.3
A	31.2	57.2	55.6	48.4

06 14 22 30 38 46

CORE SUMMARY

CORE POWER	99.9%	CALC SUB FLOW	91.3%	DP MEAS PSI	15.52
CORE FLOW	89.8%	OPER SUB FLOW	-1.2%	DP CALC PSI	20.52
LOAD LINE	107.2%	FLOW BASIS	MEAS	FEEDWTR FLOW MLB/HR	12.35

APRM CALIBRATION

	A	B	C	D
READING	100.4	100.6	100.2	100.2
AGAF	0.994	0.992	0.997	0.997

TIP RUNS RECOMMENDED

STRINGS: NONE

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.2

REVISION: 00

TASK TITLE: Review a completed CPS 9011.01 Control Rod / Position Indication
Operability Surveillance and identify discrepancies - Faulted.

TASK NUMBER: 033342C026

APPLICABILITY: RO SRO

TIME CRITICAL: YES NO FAULTED: YES NO

TRAINEE	DATE
EVALUATOR	PASS <input type="checkbox"/> FAIL <input type="checkbox"/>

COMMENTS: _____

METHOD OF TESTING:

Simulated Performance Actual Performance

Classroom Simulator Plant

APPROXIMATE TIME FOR COMPLETION: 10 minutes

Prepared/Revised by: _____ Date: _____

Approved by: _____ Date: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.2

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

Not Applicable

TASK STANDARDS:

All discrepancies on the completed CPS 9011.01 have been identified, and surveillance has been disapproved.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

None

PROCEDURAL/REFERENCES:

CPS 9011.01, Control Rod/Position Indication Operability with cover sheet

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.

INITIAL CONDITIONS AND INITIATING CUE:

The plant is operating at 100% power The A RO has completed the weekly surveillance of CPS 9011.01 Control Rod/Position Indication Operability for fully withdrawn control rods only and submitted it for review and approval. You are directed to review the surveillance, and approve if satisfactory; identify all discrepancies if not. Report when task is complete.

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.2

REVISION: 00

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. Identify control rod 28-29 marked N/A but should have been exercised.**

STANDARD: Rod 28-29 identified as not exercised.

CUE:

COMMENTS: Steps 1 and 2 may be performed in any order.

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.2

REVISION: 00

***2. Determine that control rod 36-29 was at position 6 instead of position 4.**

STANDARD: Identify that control rod 36-29 was at position 6 instead of position 4.

CUE:

COMMENTS: Steps 1 and 2 may be performed in any order.

SAT _____ UNSAT _____

***3. Determine surveillance is incomplete, and that 1 rod is in incorrect position.**

STANDARD: Surveillance not approved and discrepancies identified.

CUE:

COMMENTS: This step may be performed any time after the first discrepancy has been identified.

SAT _____ UNSAT _____

STOP TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.2

REVISION: 00

K/A REFERENCE NUMBERS

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>Importance Rating</u>	
		<u>RO</u>	<u>SRO</u>
GENERIC	2.2.12	3.0	3.4

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

INITIATING CUE

The plant is operating at 100% power The A RO has completed the weekly surveillance of CPS 9011.01 Control Rod/Position Indication Operability for fully withdrawn control rods only and submitted it for review and approval. You are directed to review the surveillance, and approve if satisfactory; identify all discrepancies if not. Report when task is complete.

CONTROL ROD/POSITION INDICATION OPERABILITY

SCOPE OF REVISION:

- Incorporated PAC 0407-97: Editorial typo. Rev marks not retained.
- Format/Organizational title updates, placekeeping aid enhancements, section 5.1 updated to include annunciator impact per 1005.01.
- CR1-98-02-110 (MLSR Project):
 Incorporated performance criteria and credit for ITS SR 3.9.5.1 MODE 5 control rod position checks.
- Documentation content of canceled CPS No. 9011.01C001, CONTROL ROD OPERABILITY CHECKLIST incorporated into body of this procedure.
- Incorporated PAC 0502-99, PDRs 99-0906 and 00-0298.

CONTINUOUS USE

ORIGINATOR: *Thomas J. Landin*

CLASS CODE: *SNNN*

ITR: *K. Zipprich*

APPROVAL DATE: *SEP 16 1998*

CURRENT CHANGES TO GENERAL REVISION

Change #	Date	List of Affected Pages
1 27a	02/21/01	1,3,4,6
2		
3		
4		
5		

c 1.0

PURPOSE

Provide instructions for verifying control rod insertion capability by inserting each applicable PARTIALLY or FULLY withdrawn control rod one notch and observing that the control rod moves, thereby ensuring the control rod is not stuck and is free to insert on a SCRAM.

Instructions are also provided to return the control rods to their original positions to verify each applicable control rod is operable and that the position indication for each applicable control rod is operable.

This surveillance satisfies ITS SR requirements:

- 3.1.3.2, Insert each FULLY withdrawn control rod one notch (7 days)
- 3.1.3.3, Insert each PARTIALLY withdrawn control rod one notch (31 days)
- 3.9.5.1, Insert each withdrawn control rod one notch (7 days - MODE 5)

2.0

DISCUSSION/DEFINITIONS

c 2.1

FREQUENCY

2.1.1 Normal Frequency (MODES 1, 2):

7 Days - for FULLY withdrawn control rods with
THERMAL POWER > LPSP of the RPCS

31 Days - for PARTIALLY withdrawn control rods with
THERMAL POWER > LPSP of the RPCS

2.1.2 Other Triggers:

- a) Within 24 hours from discovery of any withdrawn control rod that is stuck (will not insert by either CRD drive water or scram pressure) - for all control rods either PARTIALLY or FULLY withdrawn, concurrent with THERMAL Power > the LPSP of the RPCS.
- b) MODE 5 when control rod withdrawn triggered via CPS No. 9000.01D002, CONTROL ROOM OPERATOR SURVEILLANCE LOG - MODE 4,5 DATA SHEET (7 day frequency).

2.2

Individual sections or an individual step or individual steps within a section of this procedure may be performed independently for PMT or other maintenance activities. Those steps within a section that are not performed should be marked N/A. When only parts of a section are performed, it is the responsibility of the SM/CRS and the performer to ensure that all necessary prerequisites, precautions and limitations are met for those steps that

will be performed. Additionally, the impact of NOT performing the remaining steps must also be understood.

2.3

All applicable control rods (control rods not required to have their directional control valves disarmed electrically or hydraulically) will be moved at least one notch to verify proper rod motion and position indication response. Control rod exercising should be performed by a single notch insertion and single notch withdrawal, in as short a time as possible.

3.0

RESPONSIBILITY

Operations Department Head is responsible for the implementation of this procedure.

4.0

PRECAUTIONS

4.1

Plant evolutions which may result in reactivity changes should be avoided during performance of this surveillance.

4.2

Document control rod movement per CPS No. 9000.09, CPS CONTROL ROD MANIPULATION LOGS.

5.0

PREREQUISITESInitials

5.1

In conjunction with the SM/CRS, review the following impact statements to determine required plant status to perform this test:

OPERABILITY IMPACT:

ITS LCO 3.1.3 - Control Rod Operability

SYSTEMS AFFECTED:

①

AFFECTED ANNUNCIATORS AND COMPUTER POINTS: None

RPS TRIP: N/A

CRVICS ISOLATION: N/A

REQUIRED OPERABLE CHANNELS: N/A

①

PLANT/SYSTEM CONDITIONS REQUIRED TO CONDUCT TEST

When in MODEs 1, 2: Power > low power set point (LPSP) of the Rod Pattern Control System (RPCS).

When in MODEs 1, 2: For control rods not FULLY withdrawn, MAPRAT ≤ 0.96. If MAPRAT > 0.96 a power reduction will be required prior to testing control rods that are not FULLY withdrawn.

COINCIDENT CHANNELS TO PREVENT ACTUATION: N/A

MM / DL
SM/CRS Test Performer

- ① 5.2 MODE 1, 2: Reactor power (> LPSP). 100 % DL
[N/A when in MODE 5.]
- ① 5.3 SM/CRS permission to perform this surveillance. WCM
SM/CRS
XX:XX / XX/XX/XX
Time/Date

6.0 LIMITATIONS

- 6.1 IF A control rod (or gang) is found out of sequence,
THEN Enter CPS No. 4007.02, INADVERTENT ROD MOVEMENT.
- 6.2 In the event of accidental insertion of more than one notch, withdrawal should be by single notch to avoid any possible over-notching on the withdrawal.
- ① 6.3 MODES 1, 2: MAPRAT shall be ≤ 0.96 when exercising PARTIALLY withdrawn control rods. This limitation does not apply to FULLY withdrawn control rods.
- ① c 6.4 In order to maintain Rod Withdraw Limiter operability for partially withdrawn rods, ensure that a control rod that has been inserted is deselected and reselected prior to withdrawing that rod. When finished with rod movement, all control rods shall be deselected.

7.0 MATERIALS AND/OR TEST EQUIPMENT - None8.0 PROCEDUREInitials

- ① 8.1 Obtain a Plant Monitoring System (PMS) Control Rod Position printout, using either: OD-7 Option 2, OD-7 Option 4, or Official 3D Case. DL
- ① 8.1.1 From the OD-7 edit or Official 3D Case, determine which control rods are not required to be tested because they are not withdrawn. DL
- 8.1.2 Identify any control rods which are disarmed. DL
- 8.1.3 Identify any control rods which are PARTIALLY withdrawn. DL

NOTE

When exercising PARTIALLY withdrawn rods during the monthly test, a "P/" should be used before initials to differentiate between partially withdrawn and fully withdrawn rods.

In this manner, the MODE 1, 2 requirement to limit MAPRAT ≤ 0.96 can be more readily determined.

8.1.4 On the CORE MAP (page 8):

- Mark disarmed control rods with "DA". 70/A
- Mark FULLY inserted control rods with "N/A". 70/A
- Mark partially withdrawn control rods with "P/"
(if exercising PARTIALLY inserted rods). 70/A
- Mark partially withdrawn control rods with "N/A"
(if not exercising PARTIALLY inserted rods). DA

NOTE

MODE 1 or 2:

Individual and/or ganged rod movement may be used to perform this surveillance.

FULLY withdrawn control rods are not required to be performed until 8 days 18 hours after the control rod is fully withdrawn and THERMAL POWER is > LPSP of the RPCS.

Rods at position 46 for cooling shall be considered FULLY withdrawn and subject to the 7 day frequency. These rods may be required to be returned to position 48 first to perform the surveillance.

PARTIALLY withdrawn control rods are not required to be performed until 38 days 18 hours after the control rod is withdrawn and THERMAL POWER > LPSP of the RPCS.

MODE 5:

Individual rod movement shall be used to perform this surveillance.

Withdrawn control rods are not required to be performed until 7 days after the control rod is withdrawn.

8.2 Exercise of FULLY (PARTIALLY)
Withdrawn Control Rods
Initials

- 8.2.1 MODES 1, 2 PARTIALLY withdrawn rods only
(N/A for FULLY withdrawn rods or MODE 5):

Verify MAPRAT \leq 0.96. MAPRAT 70/A

If MAPRAT > 0.96, then a power reduction shall be required to achieve MAPRAT \leq 0.96 prior to testing any PARTIALLY withdrawn control rods.

- 8.2.2 Select and insert the desired rod(s) one notch,
noting proper position indication tracking. X

Place Keeping Aid

- 8.2.3 Withdraw the selected rod(s) one notch to original position. X
Place Keeping Aid
- a) Observe proper rod position indication tracking to the original rod position. X
Place Keeping Aid
- b) Check off the selected rod(s) after the rod(s) is tested by initialing the rod(s). [Document on CORE MAP] X
Place Keeping Aid
- 8.2.4 Repeat steps 8.2.2 and 8.2.3 for each FULLY (PARTIALLY) withdrawn control rod. X
Place Keeping Aid

8.3 RESTORATION Initials

- ① 8.3.1 Obtain a PMS Control Rod Position printout: OD-7 Option 2, OD-7 Option 4, or Official 3D Case. DA
- 8.3.2 Compare the initial and final Control Rod Position printouts to verify proper rod positions. DA
- ① 8.3.3 Notify the SM/CRS of the completion of this test. DA

XX:XX / XX/XX/XX
Time/Date

9.0 ACCEPTANCE CRITERIA

- 9.1 Operability Requirements - Failure to meet the Acceptance Criteria shall constitute a failure to comply with the applicable LCO. ITS should be immediately reviewed to identify Action Statements needed for implementation. Refer to Supplemental Review Sheet for applicable LCOs.
- 9.1.1 All withdrawn control rods not required to have their directional control valves disarmed electrically or hydraulically are inserted at least 1 notch.
- 9.1.2 The indicated control rod position changes during movement of the Control Rod Drive.
- 9.2 Other Requirements - None

10.0 FINAL CONDITIONS

The control rods are returned to their original positions.

11.0 REFERENCES

- 11.1 CPS No. 4007.02, INADVERTENT ROD MOVEMENT
- 11.2 CPS No. 9000.01D002, CONTROL ROOM OPERATOR SURVEILLANCE LOG - MODE 4,5 DATA SHEET
- 11.3 CPS No. 9000.09, CPS CONTROL ROD MANIPULATION LOGS
- c 11.4 ITS SR 3.1.3.2, SR 3.1.3.3, SR 3.9.5.1 (2.1)
- 11.5 USAR 3.1.2.3.2.1, 4.6.3.1.1.5
- 11.6 GE Control Rod Drive Design Spec Data Sheet 22A5395 AE
- 11.7 GE Letter GGJ-88-100 dated 7-29-88
- ① c 11.8 CR 1-99-04-097 (6.4)

12.0 APPENDICES - None① 13.0 DOCUMENTS - None

CORE MAP

	<u>DL</u>											
	16-53	20-53	24-53	28-53	32-53	36-53	40-53					
	<u>DL</u>											
	12-49	16-49	20-49	24-49	28-49	32-49	36-49	40-49	44-49			
	<u>DL</u>											
	08-45	12-45	16-45	20-45	24-45	28-45	32-45	36-45	40-45	44-45	48-45	
<u>DL</u>												
04-41	08-41	12-41	16-41	20-41	24-41	28-41	32-41	36-41	40-41	44-41	48-41	52-41
<u>DL</u>	<u>DL</u>	<u>DL</u>	<u>DL</u>	N/A	<u>DL</u>	N/A	<u>DL</u>	N/A	<u>DL</u>	<u>DL</u>	<u>DL</u>	<u>DL</u>
04-37	08-37	12-37	16-37	20-37	24-37	28-37	32-37	36-37	40-37	44-37	48-37	52-37
<u>DL</u>												
04-33	08-33	12-33	16-33	20-33	24-33	28-33	32-33	36-33	40-33	44-33	48-33	52-33
<u>DL</u>	<u>DL</u>	<u>DL</u>	<u>DL</u>	N/A	<u>DL</u>	N/A	<u>DL</u>	N/A	<u>DL</u>	<u>DL</u>	<u>DL</u>	<u>DL</u>
04-29	08-29	12-29	16-29	20-29	24-29	28-29	32-29	36-29	40-29	44-29	48-29	52-29
<u>DL</u>												
04-25	08-25	12-25	16-25	20-25	24-25	28-25	32-25	36-25	40-25	44-25	48-25	52-25
<u>DL</u>	<u>DL</u>	<u>DL</u>	<u>DL</u>	N/A	<u>DL</u>	N/A	<u>DL</u>	N/A	<u>DL</u>	<u>DL</u>	<u>DL</u>	<u>DL</u>
04-21	08-21	12-21	16-21	20-21	24-21	28-21	32-21	36-21	40-21	44-21	48-21	52-21
<u>DL</u>												
04-17	08-17	12-17	16-17	20-17	24-17	28-17	32-17	36-17	40-17	44-17	48-17	52-17
	<u>DL</u>											
	08-13	12-13	16-13	20-13	24-13	28-13	32-13	36-13	40-13	44-13	48-13	
		<u>DL</u>										
		12-09	16-09	20-09	24-09	28-09	32-09	36-09	40-09	44-09		
			<u>DL</u>									
			16-05	20-05	24-05	28-05	32-05	36-05	40-05			

UNIT 1, PAGE 1 OF 1

Initial positions

OD-7, CONTROL ROD NOTCH POSITIONS, NEW SCAN (Option 4)

53

49

45

41

37

33

29

25

21

17

13

9

5

18

4

18

4

4

18

4

18

4

8

12

16

20

24

28

32

36

40

44

48

52

Initial Positions

OD-7, CONTROL ROD NOTCH POSITIONS, NEW SCAN (Option 2)

53				48	48	48	48	48	48	48			
49			48	48	48	48	48	48	48	48	48		
45		48	48	48	48	48	48	48	48	48	48	48	
41	48	48	48	48	48	48	48	48	48	48	48	48	48
37	48	48	48	48	18	48	4	48	18	48	48	48	48
33	48	48	48	48	48	48	48	48	48	48	48	48	48
29	48	48	48	48	4	48	48	48	4	48	48	48	48
25	48	48	48	48	48	48	48	48	48	48	48	48	48
21	48	48	48	48	18	48	4	48	18	48	48	48	48
17	48	48	48	48	48	48	48	48	48	48	48	48	48
13		48	48	48	48	48	48	48	48	48	48	48	
9			48	48	48	48	48	48	48	48	48		
5				48	48	48	48	48	48	48			
	4	8	12	16	20	24	28	32	36	40	44	48	52

CLINTON CYCLE 6 INSTRUMENT READINGS/STATUS
CALIBRATED LPRM READINGS

SEQUENCE NO 23
17-JUL-2001 20:00 CALCULATED
17-JUL-2001 20:01 PRINTED
CASE ID FMLD1950708205855
LPRM SHAPE - FULL CORE

47D	40.1	49.8	55.7	45.9	30.2
C	57.0	59.8	60.3	64.5	43.0
B	61.2	63.6	60.9	69.2	41.9
A	51.1	54.9	49.5	63.0	27.7
39D	35.4	51.3	58.4	61.1	57.5
C	55.8	62.7	60.3	59.6	66.5
B	60.0	65.2	60.7	57.0	66.7
A	52.7	61.1	50.4	44.4	54.7
31D	39.9	51.6	55.8	56.0C	55.7
C	63.7	71.1	68.3	63.1	72.6P
B	69.6	71.2	66.7	59.2	72.9
A	67.6M	69.0	61.1	45.4	71.1
23D	40.0	54.3	58.1	57.9	59.5
C	62.2	67.3D	63.7	59.2	66.8
B	67.1	67.1	61.4	56.9	66.6
A	66.5	58.6	48.7	44.2	55.6
15D	28.5	46.2	55.5	57.2	0.0
C	42.4	63.6	62.8	59.1	65.4
B	43.2	68.6	61.9	57.4	67.6
A	0.0	61.7	49.9	44.3	64.3
07D	29.1	39.3	40.7	36.6	
C	41.4	58.6	56.6	54.5	
B	42.3	64.8	61.8	58.3	
A	31.2	57.2	55.6	48.4	

OF TIPS REJECTED: 1

FAILED SENSORS:

LPRM (2 SIGNAL FAILED)
615A 3815D
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

06 14 22 30 38 46

CORE SUMMARY

CORE POWER	99.9%	CALC SUB FLOW	91.3%	DP MEAS PSI	15.52
CORE FLOW	89.8%	OPER SUB FLOW	-1.2%	DP CALC PSI	20.52
LOAD LINE	107.2%	FLOW BASIS	MEAS	FEEDWTR FLOW MLB/HR	12.35

APRM CALIBRATION

	A	B	C	D
READING	100.4	100.6	100.2	100.2
AGAF	0.994	0.992	0.997	0.997

TIP RUNS RECOMMENDED

STRINGS: NONE

Final Positions

OD-7, CONTROL ROD NOTCH POSITIONS, NEW SCAN (Option 4)

53

49

45

41

37

33

29

25

21

17

13

9

5

18

4

18

4

6

18

4

18

4

8

12

16

20

24

28

32

36

40

44

48

52

Final Positions

OD-7, CONTROL ROD NOTCH POSITIONS, NEW SCAN (Option 2)

53				48	48	48	48	48	48	48			
49			48	48	48	48	48	48	48	48	48		
45		48	48	48	48	48	48	48	48	48	48	48	
41	48	48	48	48	48	48	48	48	48	48	48	48	48
37	48	48	48	48	18	48	4	48	18	48	48	48	48
33	48	48	48	48	48	48	48	48	48	48	48	48	48
29	48	48	48	48	4	48	48	48	6	48	48	48	48
25	48	48	48	48	48	48	48	48	48	48	48	48	48
21	48	48	48	48	18	48	4	48	18	48	48	48	48
17	48	48	48	48	48	48	48	48	48	48	48	48	48
13		48	48	48	48	48	48	48	48	48	48	48	
9			48	48	48	48	48	48	48	48	48		
5				48	48	48	48	48	48	48			
	4	8	12	16	20	24	28	32	36	40	44	48	52

CORE PARAMETERS

POWER MWT 2890.
 POWER MWE 967.
 FLOW MLB/HR 75.844
 FPAPDR 0.824
 SUBC BTU/LB 23.49
 PR PSIA 1027.9
 CORE MWD/ST 20850.8
 CYCLE MWD/ST 8741.6
 MCPR 1.268

CLINTON CYCLE 6
 3D MONICORE
 PERIODIC LOG

SEQUENCE NO 23
 17-JUL-2001 20:58 CALCULATED
 17-JUL-2001 20:59 PRINTED
 CASE ID FMLD1950708205855
 RESTART FMLD1950708195845
 LPRM SHAPE - FULL CORE

CALC RESULTS

Keff 1.0000
 XE WORTH % -2.52
 XE/RATED 1.00

LOAD LINE SUMMARY

CORE POWER 99.9%
 CORE FLOW 89.8%
 LOAD LINE 107.2%

CORRECTION FACTOR: MFLCPR= 1.000 MFLPD= 1.000 MAPRAT= 0.999
 OPTION: ARTS DUAL LOOP MANUAL FLOW MCPRLIM= 1.240

MOST LIMITING LOCATIONS (NON-SYMMETRIC)

MFLCPR	LOC	MFLPD	LOC	MAPRAT	LOC	PCRAT	LOC
0.978	37-28	0.912	17-22-18	0.821	7-28-5	0.798	41-28-16
0.976	39-26	0.912	7-28-5	0.817	15-30-16	0.798	19-28-16
0.975	41-28	0.912	41-28-16	0.817	11-22-13	0.797	7-28-5
0.973	11-28	0.902	19-28-16	0.816	19-26-16	0.791	39-22-20
0.940	13-32	0.896	15-38-18	0.813	19-30-15	0.782	9-22-13
0.939	9-26	0.895	21-26-16	0.803	7-26-12	0.779	11-20-13
0.937	11-20	0.893	17-26-16	0.802	9-36-13	0.779	17-26-16
0.930	39-22	0.889	9-22-13	0.798	11-30-11	0.777	11-28-15
0.927	7-28	0.889	11-20-13	0.796	9-26-5	0.776	13-32-16
0.923	9-22	0.888	13-32-16	0.795	39-22-20	0.774	47-26-12

SEQ. B-2 C=MFLCPR D=MFLPD M=MAPRAT P=PCRAT *-MULTIPLE CORE AVE AXIAL

53	NOTCH	REL PW	LOC
	00	0.238	25
	02	0.446	24
	04	0.804	23
	06	0.963	22
	08	1.056	21
	10	1.158	20
	12	1.191	19
	14	1.163	18
	16	1.182	17
	18	1.220	16
	20	1.215	15
	22	1.187	14
	24	1.212	13
	26	1.207	12
	28	1.181	11
	30	1.170	10
	32	1.166	09
	34	1.131	08
	36	1.085	07
	38	1.072	06
	40	1.050	05
	42	0.998	04
	44	0.920	03
	46	0.749	02
	48	0.237	01

CORE AVERAGE RADIAL POWER DISTRIBUTION

RING #	1	2	3	4	5	6	7
REL PW	0.890	1.084	1.113	1.102	1.155	1.145	0.727

CLINTON CYCLE 6

INSTRUMENT READINGS/STATUS
CALIBRATED LPRM READINGS

SEQUENCE NO 23
17-JUL-2001 20:58 CALCULATED
17-JUL-2001 20:59 PRINTED
CASE ID FMLD1950708205855
LPRM SHAPE - FULL CORE

47D	40.1	49.8	55.7	45.9	30.2
C	57.0	59.8	60.3	64.5	43.0
B	61.2	63.6	60.9	69.2	41.9
A	51.1	54.9	49.5	63.0	27.7
39D	35.4	51.3	58.4	61.1	57.5
C	55.8	62.7	60.3	59.6	66.5
B	60.0	65.2	60.7	57.0	66.7
A	52.7	61.1	50.4	44.4	54.7
31D	39.9	51.6	55.8	56.0C	55.7
C	63.7	71.1	68.3	63.1	72.6P
B	69.6	71.2	66.7	59.2	72.9
A	67.6M	69.0	61.1	45.4	71.1
23D	40.0	54.3	58.1	57.9	59.5
C	62.2	67.3D	63.7	59.2	66.8
B	67.1	67.1	61.4	56.9	66.6
A	66.5	58.6	48.7	44.2	55.6
15D	28.5	46.2	55.5	57.2	0.0
C	42.4	63.6	62.8	59.1	65.4
B	43.2	68.6	61.9	57.4	67.6
A	0.0	61.7	49.9	44.3	64.3
07D	29.1	39.3	40.7	36.6	
C	41.4	58.6	56.6	54.5	
B	42.3	64.8	61.8	58.3	
A	31.2	57.2	55.6	48.4	

OF TIPS REJECTED: 1

FAILED SENSORS:
LPRM (2 SIGNAL FAILED)
615A 3815D
LPRM (0 PANACEA REJECTED)
OTHER SENSORS (0 TOTAL)
SUB RODS
NONE

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

06 14 22 30 38 46

CORE SUMMARY

CORE POWER	99.9%	CALC SUB FLOW	91.3%	DP MEAS PSI	15.52
CORE FLOW	89.8%	OPER SUB FLOW	-1.2%	DP CALC PSI	20.52
LOAD LINE	107.2%	FLOW BASIS	MEAS	FEEDWTR FLOW MLB/HR	12.35

APRM CALIBRATION

	A	B	C	D
READING	100.4	100.6	100.2	100.2
AGAF	0.994	0.992	0.997	0.997

TIP RUNS RECOMMENDED

STRINGS: NONE

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

TASK TITLE: Determine expected dose operator would receive while performing an LLRT, and select an operator to prevent exceeding dose limit.

TASK NUMBER: 033299C556

APPLICABILITY: RO SRO X

TIME CRITICAL: YES NO X FAULTED: YES NO X

_____	_____
TRAINEE	DATE
_____	_____
EVALUATOR	PASS <u> </u> FAIL <u> </u>

COMMENTS: _____

METHOD OF TESTING:

Simulated Performance Actual Performance X
Classroom X Simulator Plant

APPROXIMATE TIME FOR COMPLETION: 16 minutes

Prepared/Revised by: _____ Date: _____

Approved by: _____ Date: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

Not Applicable

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
CPS 3303.01V001, REACTOR WATER CLEANUP VALVE LINEUP

PROCEDURAL/REFERENCES:

CPS 1024.15 OCCUPATIONAL RADIATION EXPOSURE CONTROL AND MONITORING

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

INITIAL CONDITIONS AND INITIATING CUE:

You are the SRO in charge of LLRTs during a fall refueling outage. You are preparing to perform a retest on RWCU LLRT 1MC-061 which will require an operator to perform tasks in the Containment Steam Tunnel approximately 12 inches from 1G33-F053. The tasks are estimated to take ½ hour to complete.

Your task is to determine the expected dose that an operator would receive while completing this job, and then determine which of the following operators can be assigned the work. Vocalize your thought process.

NAME	YEAR TO DATE DOSE
John	1950 mr
Paul	1800 mr
George	1750 mr
Fred	1930 mr

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

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 Containment Steam Tunnel.**

STANDARD: Locates survey map of Containment Steam Tunnel.

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

COMMENTS: Survey maps may be available in the following locations:

- Service Building entrance to the RCA
- R & S line near the Maintenance Area
- Radiation Protection Office
- Access Control Point

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

***2. Determine 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:

COMMENTS:

SAT _____ UNSAT _____

***3. Calculates expected dose.**

STANDARD: Expected dose calculated to be:
- 100 mrem if the 200 mr/hr rate is used.
- 75 mrem if the 150 mr/hr rate is used.

CUE:

COMMENTS:

SAT _____ UNSAT _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

***4. Determine that Paul or George could be assigned the work**

STANDARD: The correct operators are selected

CUE:

COMMENTS: The Admin Limit is 2000 mr/yr

If 100 mrem dose is used

John would receive 2050 mr

Paul would receive 1900 mr (*good*)

George would receive 1850 mr (*good*)

Fred would receive 2030 mr.

If 75 mrem dose is used

John would receive 2025 mr

Paul would receive 1875 mr (*good*)

George would receive 1825 mr (*good*)

Fred would receive 2005 mr.

SAT _____ UNSAT _____

STOP TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.3

REVISION: 00

K/A REFERENCE NUMBERS

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>Importance Rating</u>	
		<u>RO</u>	<u>SRO</u>
GENERIC	2.3.10	2.9	3.3

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

INITIATING CUE

You are the SRO in charge of LLRTs during a fall refueling outage. You are preparing to perform a retest on RWCU LLRT 1MC-061 which will require an operator to perform tasks in the Containment Steam Tunnel approximately 12 inches from 1G33-F053. The tasks are estimated to take ½ hour to complete.

Your task is to determine the expected dose that an operator would receive while completing this job, and then determine which of the following operators can be assigned the work. Vocalize your thought process.

NAME	YEAR TO DATE DOSE
John	1950 mr
Paul	1800 mr
George	1750 mr
Fred	1930 mr

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

TASK TITLE: Determine an EP Protective Action Recommendation with
a subsequent wind direction change.

TASK NUMBER: 031344C503

APPLICABILITY: RO SRO X

TIME CRITICAL: YES X NO FAULTED: YES NO X

TRAINEE

DATE

PASS FAIL

EVALUATOR

COMMENTS: _____

METHOD OF TESTING:

Simulated Performance Actual Performance X

Classroom X Simulator Plant

APPROXIMATE TIME FOR COMPLETION: 15 minutes

Prepared/Revised by: _____ Date: _____

Approved by: _____ Date: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

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.

SIMULATOR SET-UP CONDITIONS:

Not Applicable

TASK STANDARDS:

The Protective Action Recommendation has been made in accordance with RA-02.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

None

PROCEDURAL/REFERENCES:

RA-02 PROTECTIVE ACTION RECOMMENDATIONS, Rev. 4

EVALUATOR INSTRUCTIONS:

Provide NARS form Utility Message #1

INITIAL CONDITIONS AND INITIATING CUE:

A LOCA has occurred in the plant. Level is less than TAF and containment pressure is 15 psig. No release of radioactive materials has occurred. An EAL Upgrade to General Emergency has been declared and the initial NARS Form has been completed.

A wind direction change occurs, and the EROC has completed the NARS Form for the update with the exception of section 9. Fill out section 9. Report when the task is complete.

START TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

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. RECOMMENDED ACTIONS**

[A] NONE

[B] PREPARE FOR POSSIBLE ACTION INVOLVING THE PUBLIC

[X] INITIATE PUBLIC NOTIFICATION PROCEDURES

INSTRUCT THE PUBLIC TO TAKE THE FOLLOWING ACTIONS:

<u>SHELTER</u>	<u>EVACUATE</u>	<u>UTILITY ONLY</u>
[D]	[X]	0 - 2 MILE RADIUS
[E]	[I]	0 - <u> </u> MILE RADIUS
[F]	[X]	2 - 5 MILES FOR SECTORS <u>B,C,D & E</u>
[X]	[K]	5 - 10 MILES FOR SECTORS <u>Remainder of the EPZ</u>

[L] SHELTER	SUB-AREAS: _____	
[M] EVACUATE	SUB-AREAS: _____	

STANDARD: Determines Protective Action Recommendation using RA-02. (9.C - G, H, J)
Selects the following: C, G, H and J, writes in sectors B, C, D & E lines through "5 - 10 MILES FOR SECTORS" and writes in Remainder of the EPZ.

CUE:

COMMENTS:

SAT _____ UNSAT _____

STOP TIME: _____

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

JPM NUMBER: A.4

REVISION: 00

K/A REFERENCE NUMBERS

<u>K/A SYSTEM NUMBER</u>	<u>K/A NUMBER</u>	<u>Importance Rating</u>	
		<u>RO</u>	<u>SRO</u>
GENERIC	2.4.44	2.1	4.0

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

INITIATING CUE

A LOCA has occurred in the plant. Level is less than TAF and containment pressure is 15 psig. No release of radioactive materials has occurred. An EAL Upgrade to General Emergency has been declared and the initial NARS Form has been completed.

A wind direction change occurs, and the EROC has completed the NARS Form for the update with the exception of section 9. Fill out section 9. Report when the task is complete.

CLINTON POWER STATION
NRC INITIAL LICENSE EXAM 2001-01
SRO ADMINISTRATIVE JPM

UTILITY MESSAGE NO. 1

STATE OF ILLINOIS
NUCLEAR ACCIDENT REPORTING SYSTEM FORM
AUGUST 1994

STATE MESSAGE NO. _____

STATUS

- ACTUAL
- EXERCISE
- DRILL
- TERMINATION

2. STATION

- DRESDEN
- LASALLE
- QUAD CITIES
- ZION
- BYRON
- BRAIDWOOD
- CLINTON

3. ON-SITE ACCIDENT CLASSIFICATION

- UNUSUAL EVENT
- ALERT
- SITE AREA EMERGENCY
- GENERAL EMERGENCY
- RECOVERY
- NOT APPLICABLE

4. ACCIDENT CLASSIFIED

TIME: XX:XX
 DATE: XX/XX/XX
 EAL#: 1.1

ACCIDENT TERMINATED

TIME: N/A
 DATE: N/A

5. RELEASE TO ENVIRONMENT

- NONE
- POTENTIAL
- OCCURRING
- TERMINATED

6. TYPE OF RELEASE

- NOT APPLICABLE
- RADIOACTIVE GAS
- RADIOACTIVE LIQUID

7. WIND DIRECTION:

FROM 225 (DEGREES)
 DOWNWIND SECTOR: C

8. WIND SPEED (COMPLETE ONE OF THE FOLLOWING:)

- METERS/SEC.: _____
- MILES/HR.: 10

9. RECOMMENDED ACTIONS

- NONE
 - PREPARE FOR POSSIBLE ACTION INVOLVING THE PUBLIC
 - INITIATE PUBLIC NOTIFICATION PROCEDURES
- INSTRUCT THE PUBLIC TO TAKE THE FOLLOWING ACTIONS:

SHELTER	EVACUATE	UTILITY ONLY
<input type="checkbox"/> [D]	<input checked="" type="checkbox"/> [I]	0 - 2 MILE RADIUS
<input type="checkbox"/> [E]	<input type="checkbox"/> [J]	0 - MILE RADIUS
<input type="checkbox"/> [F]	<input checked="" type="checkbox"/> [K]	2 - 5 MILES FOR SECTORS <u>B, C, D</u>
<input checked="" type="checkbox"/> [G]	<input type="checkbox"/> [L]	5 - 10 MILES FOR SECTORS <u>REMAINDER OF EPZ</u>

[L] SHELTER	SUB-AREAS: _____	(STATE USE ONLY)
[M] EVACUATE	SUB-AREAS: _____	(STATE USE ONLY)

- [N] RECOMMEND POTASSIUM IODIDE (KI) IN ACCORDANCE WITH PROCEDURES (STATE USE ONLY)
- [O] CONFINE MILK-PRODUCING ANIMALS ON STORED FEED AND PROTECTED WATER OUT TO _____ MILE RADIUS (STATE USE ONLY)
- [P] COMMENCE RETURN OF PUBLIC (STATE USE ONLY)

[Q] OTHER _____

10. ADDITIONAL INFORMATION: LOCA, RPV LEVEL BELOW TAF, CNMT PRESS 15 PSIG.

11. MESSAGE TRANSMITTED BY:

D. CLINES
 (NAME)
CPS
 (ORGANIZATION)
1-217-935-9812
 (OUTSIDE PHONE NUMBER)

12. MESSAGE TRANSMITTED:

CURRENT TIME: XX:XX
 CURRENT DATE: XX/XX/XX

13. MESSAGE RECEIVED BY:

JOHN DDE
 (NAME)
IEMA
 (ORGANIZATION)

UTILITY USE ONLY

APPROVED BY: JN
 (INITIALS)
XX:XX
 (TIME)

OUTSIDE PHONE NUMBERS

IEMA	217-782-7880	<input type="checkbox"/>	<input type="checkbox"/>
IDNS	217-785-0800	<input type="checkbox"/>	<input type="checkbox"/>
DeWitt Co. ESDA	217-935-9598	<input type="checkbox"/>	<input type="checkbox"/>
DeWitt Co. Sheriff	217-935-3196	<input type="checkbox"/>	<input type="checkbox"/>

INITIAL	FINAL
ROLL	ROLL
CALL	CALL

**STATE OF ILLINOIS
NARS FORM**

**INSTRUCTIONS FOR USE
(UTILITY FORM)**

Complete the NARS as follows:

UTILITY MESSAGE NUMBER - For use by Utility personnel only. Number Messages sequentially, starting with 1, for the Event described. Enter "N/A" if this is a State NARS.

STATE MESSAGE NUMBER - Enter State Message Number when receiving a NARS message from the State. Enter "N/A" if this is a Utility NARS.

1. **STATUS** - Check the letter corresponding to the appropriate status description.
2. **STATION** - Check the letter corresponding to the affected Station.
3. **ON-SITE ACCIDENT CLASSIFICATION** - Check the letter corresponding to the classification issued by the Utility.
4. **ACCIDENT CLASSIFIED** - Fill in the time and date at which the most recent accident classification was determined by the Utility. Also fill in the applicable On-Site Emergency Action Level (EAL) code number. Enter "N/A" if this is an accident termination message.

ACCIDENT TERMINATED - Fill in the time and date of the accident termination, if applicable. Enter "N/A" if this is an accident classified message.

5. **RELEASE TO ENVIRONMENT** - Check the letter corresponding to the appropriate description.

6. **TYPE OF RELEASE** - Check the letter corresponding to the appropriate release type.

7. **WIND DIRECTION** - Fill in the direction from which the wind is coming, in degrees.

DOWNWIND SECTOR - Fill in the letter corresponding to the Downwind Sector. Use environmental sampling maps or the following table.

DOWNWIND			DOWNWIND		
SECTOR	WIND FROM	DEGREES	SECTOR	WIND FROM	DEGREES
J	N	349-11	A	S	169-191
K	NNE	12-33	B	SSW	192-213
L	NE	34-56	C	SW	214-236
M	ENE	57-78	D	WSW	237-258
N	E	79-101	E	W	259-281
P	ESE	102-123	F	WNW	282-303
Q	SE	124-146	G	NW	304-326
R	SSE	147-168	H	NNW	327-348

8. **WIND SPEED** - Fill in the wind speed under meters/second or miles/hour.

9. **RECOMMENDED ACTIONS** - Check the letter corresponding to the appropriate protective action. Add additional information if [C] is chosen. If recommending shelter or evacuation for letters [F][G][J] or [K], provide the center line sector and at least one sector on each side of center line. Letters [L-P] are for State use only.

10. **ADDITIONAL INFORMATION** - Provide additional information that will be helpful to personnel evaluating the event (e.g. Unit Number).

11. **MESSAGE TRANSMITTED BY** - Fill in name, organization and outside phone number of person transmitting the NARS Form information.

12. **MESSAGE TRANSMITTED** - Fill in the current time and date that the message was transmitted by the person listed in step 11.

13. **MESSAGE RECEIVED BY** - Fill in name and organization of person receiving the NARS message and filling out the NARS Form.

UTILITY MESSAGE NO. 2

STATE OF ILLINOIS
NUCLEAR ACCIDENT REPORTING SYSTEM FORM

STATE MESSAGE NO. _____

AUGUST 1994

1. STATUS

- ACTUAL
- EXERCISE
- DRILL
- TERMINATION

2. STATION

- DRESDEN
- LASALLE
- QUAD CITIES
- ZION
- BYRON
- BRAIDWOOD
- CLINTON

3. ON-SITE ACCIDENT CLASSIFICATION

- UNUSUAL EVENT
- ALERT
- SITE AREA EMERGENCY
- GENERAL EMERGENCY
- RECOVERY
- NOT APPLICABLE

4. ACCIDENT CLASSIFIED

TIME: XX:XX
 DATE: XX/XX/XX
 EAL#: 1.1

ACCIDENT TERMINATED

TIME: N/A
 DATE: N/A

5. RELEASE TO ENVIRONMENT

- NONE
- POTENTIAL
- OCCURRING
- TERMINATED

6. TYPE OF RELEASE

- NOT APPLICABLE
- RADIOACTIVE GAS
- RADIOACTIVE LIQUID

7. WIND DIRECTION:

FROM 240 (DEGREES)
 DOWNWIND SECTOR: D

8. WIND SPEED (COMPLETE ONE OF THE FOLLOWING:)

- METERS/SEC.: _____
- MILES/HR.: 12

9. RECOMMENDED ACTIONS

- NONE
- PREPARE FOR POSSIBLE ACTION INVOLVING THE PUBLIC
- INITIATE PUBLIC NOTIFICATION PROCEDURES

INSTRUCT THE PUBLIC TO TAKE THE FOLLOWING ACTIONS:

SHELTER	EVACUATE	UTILITY ONLY
[D]	[H]	0 - 2 MILE RADIUS
[E]	[I]	0 - <u> </u> MILE RADIUS
[F]	[J]	2 - 5 MILES FOR SECTORS _____
[G]	[K]	5 - 10 MILES FOR SECTORS _____

[L] SHELTER	SUB-AREAS: _____	(STATE USE ONLY)
[M] EVACUATE	SUB-AREAS: _____	(STATE USE ONLY)

[N] RECOMMEND POTASSIUM IODIDE (KI) IN ACCORDANCE WITH PROCEDURES (STATE USE ONLY)

[O] CONFINE MILK-PRODUCING ANIMALS ON STORED FEED AND PROTECTED WATER OUT TO _____ MILE RADIUS (STATE USE ONLY)

[P] COMMENCE RETURN OF PUBLIC (STATE USE ONLY)

[Q] OTHER _____

10. ADDITIONAL INFORMATION:

11. MESSAGE TRANSMITTED BY:

 (NAME)

 (ORGANIZATION)

 (OUTSIDE PHONE NUMBER)

12. MESSAGE TRANSMITTED:

CURRENT TIME: _____
 CURRENT DATE: _____

13. MESSAGE RECEIVED BY:

 (NAME)

 (ORGANIZATION)

UTILITY USE ONLY

APPROVED BY: _____
 (INITIALS)

 (TIME)

OUTSIDE PHONE NUMBERS

IEMA 217-782-7860
 IDNS 217-785-0600
 DeWitt Co. ESDA 217-935-9596
 DeWitt Co. Sheriff 217-935-3186

INITIAL ROLL CALL
 FINAL ROLL CALL