JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

*** DETERMINE CORRECTED FUEL ZONE LEVEL INDICATION AND WHETHER OR NOT ADEQUATE CORE COOLING EXISTS**

REASON FOR REVISION:

NRC Exam JPM **A1**

PREPARE / REVIEW:

Angie Orgeron	1538	8/26/2010
Preparer	KCN	Date
John Hedgepeth	0069	8/26/2010
Technical Review (SME)	KCN	Date
Scott Shultz	0176	9/9/2010
Operations Validation Facility Reviewer approval via ES-301-3	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Determine corrected fuel zone level indication and determine whether or not adequate core cooling exits.

TASK REFERENCE:	2000090005005

K/A REFERENCE & RATING:	2.1.25 IR 3.9

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator		Classroom	**X**

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SIMULATOR SETUP SHEET

Task Description: Determine corrected fuel zone level indication and determine whether or not adequate core cooling exits.

Required Power: N/A

IC No.: N/A

Notes: **Administrative JPM that will be conducted in a classroom.**

DATA SHEET

References for Development:	SOP-0001, Nuclear Boiler Instrumentation, Attachment 3
Required Materials:	SOP-0001, Nuclear Boiler Instrumentation, Attachment 3
Required Plant Condition:	None
Task Standard	Determine that RPV water level is below TAF and the adequate core cooling is not assured.
Applicable Objectives:	RLP-STM-0051 Obj.5
Safety Related Task:	Yes
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

The plant has experienced a LOCA.

Fuel Zone level indication is -210 inches

RPV pressure is 250 psig.

Low pressure core spray is injecting at 2500 gpm.

Initiating Cue:

The CRS has directed you to use the fuel zone correction curve of SOP-0001 (Attachment 3) and determine whether level is above or below the top of active fuel and whether or not adequate core cooling is assured to support the decision on emergency depressurization.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____1.	Plot fuel zone level indication on Attachment 3 of SOP-0001.	Candidate plotted –210 inches on y-axis of Attachment 3 of SOP-0001.	____	
_____2.	Plot RPV pressure indication on Attachment 3 of SOP-0001	Candidate plotted 250 psig on x-axis of Attachment 3 of SOP-0001.	____	
*_____3.	Identify intersection of fuel zone level and RPV pressure plots.	Candidate identified the intersection of the fuel zone level and RPV pressure lines as being **BELOW TAF** and circled on cue sheet. Candidate determined that adequate core cooling **IS NOT ASSURED** based on corrected level being below the minimum steam cooling reactor water level (MSCRWL) and circled on cue sheet.	____ ____	.

Terminating Cue: Corrected level indication determined to be below the top of active fuel and adequate core cooling does not exist. Responses documented on cue sheet.

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues
(Operator Copy)

Initial Conditions: The plant has experienced a LOCA.

Fuel Zone level indication is -210 inches

RPV pressure is 250 psig.

Low pressure core spray is injecting at 2500 gpm.

Initiating Cues: The CRS has directed you to use the fuel zone correction curve of SOP-0001 (Attachment 3) and determine whether level is above or below the top of active fuel and whether or not adequate core cooling is assured to support the decision on emergency depressurization.

Record your responses below.

Corrected Level is:

ABOVE TAF / BELOW TAF (Circle one)

Adequate Core Cooling:

IS ASSURED / IS NOT ASSURED (Circle one)

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

*** USING A CORE MONITOR PRINT OUT, DETERMINE IF THERMAL LIMITS ARE IN SPEC.**

REASON FOR REVISION:

NRC Exam JPM **A2**

PREPARE / REVIEW:

John Hedgepeth	0069	8-31-2010
Preparer	KCN	Date
Angie Orgeron	1538	8-31-2010
Technical Review (SME)	KCN	Date
Scott Dallas	1385	9-9-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Using a core monitor print out, determine if thermal limits are in spec.

TASK REFERENCE:	302001002001

K/A REFERENCE & RATING:	2.1.20 IR 4.6

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator		Classroom	**X**

COMPLETION TIME:	6 min.

MAX TIME:	N/A

JOB LEVEL:	RO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	Yes

SIMULATOR SETUP SHEET

Task Description: Using a core monitor print out, determine if thermal limits are in spec

Required Power: N/A

IC No.: N/A

Notes: **Administrative JPM that will be conducted in a classroom.**

DATA SHEET

References for Development:	STP-000-0001, Daily Operations Logs GOP-0004, Single Loop Operation
Required Materials:	STP-000-0001, Daily Operations Logs GOP-0004, Single Loop Operation Attached POWERPLEX Core Performance Log
Required Plant Condition:	N/A
Task Standard	The information is recorded in step 113 and determination made that MFLCPR acceptance criteria is not met.
Applicable Objectives:	RLP-STM-514, Obj. H5
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

The "A" Reactor Recirc Pump tripped from full power and GOP-0004, Single Loop Operation has been entered. Reactor Engineering has NOT implemented a new core monitoring system thermal limit deck for Single Loop Operation.

Initiating Cue:

The CRS has directed you to complete Step 113 of STP-000-0001, Data Sheet, with the attached Core Performance Log data and determine if acceptance criteria is met.

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____1.	STEP 113 NOTES Power Distribution Limits shall be verified to be within the limits stated in Technical Specifications within 12 hours after Thermal Power is ≥ 23.8% of rated thermal power and once per 24 hours thereafter. During Single Loop Operation, refer to GOP-0004 to determine if administrative limits are applicable.	Refered to administrative limits in GOP-0004 Step 3.4.	____	
_____2.	GOP-0004 Step 3.4 During Single Loop Operation, an administrative limit of 0.980 shall be applied to MFLCPR and an administrative limit of 0.79 shall be applied to MAPRAT while core flow is greater than 50% rated. The administrative limits may be removed once Reactor Engineering implements the appropriate core monitoring system thermal limit deck.	Used 0.980 Admin limit for MFLCPR and 0.79 for MAPRAT.	____	

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
___*__3.	Reviews Core Performance Log to obtain values for MFLPD, MAPRAT, and MFLCPR for operating log Step 113.	Filled in Step 113 identifying MFLCPR at 0.988 as exceeding SLO administrative limit. Notifies CRS of MFLCPR exceeding limit.	____	**CUE:** As CRS, acknowledge MFLCPR exceeding limit. **NOTE:** Reading being circled is NOT critical.

Terminating Cue: Step 113 of STP-000-0001, Data Sheet 1 completed and MFLCPR identified as exceeding limit.

KEY

Acceptance Criteria met YES _____

NO ___**X**___

MLFPD (Y) N

MAPRAT (Y) N

MFLCPR Y (N)

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

RJPM-NRC-D10-A2

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

RJPM-NRC-D10-A2

JPM Task Conditions/Cues
(Operator Copy)

Initial Conditions: The "A" Reactor Recirc Pump tripped from full power and GOP-0004 Single Loop Operation has been entered.
Reactor Engineering has NOT implemented a new core monitoring system thermal limit deck for Single Loop Operation.

Initiating Cues: The CRS has directed you to complete Step 113 of STP-000-0001, Data Sheet, with the attached Core Performance Log data and determine if acceptance criteria is met.

Acceptance Criteria met YES _____

NO _____

MLFPD Y / N

MAPRAT Y / N

MFLCPR Y / N

DAILY OPERATING LOGS

Step No.	Instrument	Night Panel Numbers	Limits	Day Panel Numbers
110	ENS-SWG1A Degraded (27/62-2A, B, C) and Under (27-1A, B, C) Voltage Relay Channel Check	P877 _____ Volts V-1EGSA08	≥ 3740 VAC AND ≤ 4580 VAC	P877 _____ Volts V-1EGSA08
111	ENS-SWG1B Degraded (27/62-2A, B, C) and Under (27-1A, B, C) Voltage Relay Channel Check	P877 _____ Volts V-1EGSB08		P877 _____ Volts V-1EGSB08
112	E22-S004 Degraded and Undervoltage Relay Channel Check	P601 Place E22B-S4, E22-ACB004 SYNC SWITCH in NRM/BUS.		P601 Place E22B-S4, E22-ACB004 SYNC SWITCH in NRM/BUS.
	Degraded 27/62-1, 2	_____ Incoming Volts E22-R611	≥ 3740 VAC AND ≤ 4580 VAC	_____ Incoming Volts E22-R611
	Undervoltage 27-S1, 2, 3, 4	_____ Running Volts E22-R614		_____ Running Volts E22-R614
	P601 Place E22B-S4 in OFF (Key removed) Lined up by: _____ Verified by: _____ (Initials) (Initials)			P601 Place E22B-S4 in OFF (Key removed) Lined up by: _____ Verified by: _____ (Initials) (Initials)

113	Thermal Limits Core Power		**STEP 113 NOTES** Power Distribution Limits shall be verified to be within the limits stated in Technical Specifications within 12 hours after Thermal Power is ≥ 23.8% of rated thermal power and once per 24 hours thereafter. During Single Loop Operation, Refer To GOP-0004 to determine if administrative limits are applicable.	
	(LHGR) MFLPD (Most limiting)			
	(APLHGR) MAPRAT (Most limiting)			
	(MCPR) MFLCPR (Most limiting)			

RJPM-NRC-D10-A2

POWERPLEX – III CORE PERFORMANCE LOG – OPS - 03FEB10 – 164555
B1-01-04 (02.11.03 @ 2100) GEOM=FULL
PREDICT CALCULATION – UPD TDXEC PREV PCS Y RESTART 03FEB10 - 161100

POWER	2036.0	MWTH	CYCLE EXP	10133.4	MWD/MT	CMFLCPR	.988	23-22
	(67.0%)		CORE EXP	23317.4	MWD/MT	CMAPRAT	.781	21-32-17
FLOW	45.4	MLB/HR	PRESS	1015.0	PSIA	CMFLPD	.824	21-32-17
	(53.7%)		DHS	30.40	BTU/LB	CMTPF	2.558	19-32-15
ELEC	719.6	MWE	WFW	7.473	MLB/HR	FCBB	1.879	2.46 FT
ROD-LN	106.9	%	TFW-A	383.7	DEG F	P-PCS	.000	17-34-18
K-EFF	1.0054		NON-EQ XE	.00		P-PCFC	-.252	35-10-10

CONTROL RODS SYMMETRIC, C.R. SEQUENCE: B-1, C.R. DENSITY: .070

	04	08	12	16	20	24	28	32	36	40	44	48	52	
53				- -	- -	- -	- -	- -	- -	- -				53
49			- -	- -	- -	- -	- -	- -	- -	- -	- -			49
45		- -	- -	- -	- -	- -	-	- -	- -	- -	- -	- -		45
41	- -	- -	- -	- -	06	- -	12	- -	06	- -	- -	- -	- -	41
37	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	37
33	- -	- -	10	P	24*	- -	- -	- -	24	- -	10	- -	- -	33
29	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	29
25	- -	- -	10	- -	24	- -	- -	- -	24	- -	10	- -	- -	25
21	- -	- -	- -	- -	- -	R- -	12	- -	- -	- -	- -	- -	- -	21
17	- -	- -	- -	- -	06	- -	- -	- -	17	- -	- -	- -	- -	17
13		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		13
09			- -	- -	- -	- -	- -	- -	- -	- -	- -			09
05				- -	- -	- -	- -	- -	- -	- -				05
	04	08	12	16	20	24	28	32	36	40	44	48	52	

KEY
R-MFLCPR
M-MAPRAT
X-FDLRX
P-PRECOND
*-MULT

SUBST RODS

THERMAL LIMIT DETAIL (TOP 5)

MFLCPR	LOC	MAPRAT	LOC	MFLPD	LOC	TPF	LOC
.988	23-22	.781	21-32-17	.824	21-32-17	2.558	19-32-15
.961	27-22	.773	19-24-17	.763	19-32-17	2.461	21-34-15
.938	21-28	.760	19-32-17	.751	19-24-17	2.438	23-48-04
.925	15-22	.739	15-20-09	.746	29-48-04	2.376	35-12-04
.920	13-20	.737	13-26-21	.746	29-48-04	2.376	35-12-04

AXIAL REL POWER

LOC	NOTCH	RPOW
25		.098
24	00	.315
23	02	.801
22	04	1.007
21	06	1.100
20	08	1.147
19	10	1.154
18	12	1.150
17	14	1.146
16	16	1.189
15	18	1.189
14	20	1.193
13	22	1.199
12	24	1.184
11	26	1.179
10	28	1.180
09	30	1.178
08	32	1.166
07	34	1.149
06	36	1.124
05	38	1.100
04	40	1.071
03	42	.996
02	44	.780
01	46	.204

FUEL TYPE DETAIL

TYPE	MAX LHGR LHGR	LOC	BATCH AVG EXP
14	7.427	15-20-20	32.972
15	6.380	05-20-20	27.034
16	5.005	05-30-20	27.375
17	7.140	19-22-17	20.836
18	8.616	19-28-17	26.561
19	9.622	21-32-15	28.341
20	9.045	21-28-17	12.792
21	10.185	19-32-17	12.224

AXIAL DISTRIBUTION DETAIL

CORE –AVERAGE POWER (PINER)	-3.458
CORE-AVERAGE EXPOSURE (INER)	-10.915

RADIAL RING	1	2	3	4	5	6	7
RING REL POWER	1.07	1.26	1.29	1.20	1.21	1.13	.59

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

*** IDENTIFY COMPONENTS AND SEQUENCE FOR A TAGOUT ON HVN-STR1B, TURBINE BUILDING PUMP 1A SUCTION STRAINER**

REASON FOR REVISION:

NRC Exam JPM **A3**

PREPARE / REVIEW:

John Hedgepeth	0069	8-31-2010
Preparer	KCN	Date
Angela Orgeron	1538	8-31-2010
Technical Review (SME)	KCN	Date
Scott Dallas	1385	9-9-2010
Operations Validation Facility Reviewer approval via ES-301-3	KCN	Date

* Indexing Information

TASK DESCRIPTION:	IDENTIFY COMPONENTS AND SEQUENCE FOR A TAGOUT ON HVN-STR1B, TURBINE BUILDING PUMP 1A SUCTION STRAINER

TASK REFERENCE:	300095003001

K/A REFERENCE & RATING:	2.2.13 IR 4.1

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator		Classroom	**X**

COMPLETION TIME:	17 min.

MAX TIME:	N/A

JOB LEVEL:	RO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SIMULATOR SETUP SHEET

Task Description:	IDENTIFY COMPONENTS AND SEQUENCE FOR A TAGOUT ON HVN-STR1B, TURBINE BUILDING PUMP 1A SUCTION STRAINER
Required Power:	N/A
IC No.:	N/A
Notes:	**Administrative JPM that will be conducted in a classroom.**

DATA SHEET

References for Development:	PID 22-14A, System P&ID SOP-0116, TURBINE AND RADWASTE BUILDING HVAC CHILLED WATER SYSTEM EN-OP-102 Protective and Caution Tagging
Required Materials:	PID 22-14A, System P&ID SOP-0116, TURBINE AND RADWASTE BUILDING HVAC CHILLED WATER SYSTEM (lineup section) EN-OP-102 Protective and Caution Tagging
Required Plant Condition:	The plant is operating in Mode 1, maintenance requested that HVN-STR1B be tagged out to clean and inspect the strainer.
Task Standard	Required components and sequence identified as listed on the attached answer key.
Applicable Objectives:	ELP-OPS-CLR Obj. C
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

The plant is operating in Mode 1. Maintenance requested that HVN-STR1B be tagged out to clean and inspect the strainer.

Initiating Cue:

The CRS has directed you to assist in preparing a tagout to clean and inspect HVN-STR1B.

A tagging official will enter the information you provide into the tagging computer.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____1.	Obtains documents to develop tagout.	Obtained PID 22-14A, System P&ID SOP-0116, TURBINE AND RADWASTE BUILDING HVAC CHILLED WATER SYSTEM	____	**CUE:** Provide PID and SOP when requested.
*_____2.	Identify components to be tagged and the proper sequence.	Student identified the proper components and sequence as per the answer key below.	____	

Terminating Cue: Tagout Form completed.

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

RJPM-NRC-D10-A3

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

Sequence		Component ID	Component Name	Hang Position
1	1	HVN-P1B control switch	HVN-P1B VENT CHILL WATER PUMP	STOP
2	2	NNS-SWG1B ACB19	ACB19 TURB BLDG CHILLED WP MOT HVN-P1B	Racked out
3	2	NHS-MCC1F BKR 3B	CHILLED WATER PUMP P1B DISCHARGE VALVE	off
4	3	HVN-MOV4B	CHILLED WATER PUMP P1B DISCHARGE VALVE hand wheel	closed
5	4	HVN-V2	TURB BLDG PUMP 1B HVN-P1B SUCTION	closed
6	5	HVN-V18	TURB BLDG PUMP 1B SUCTION STRAINER HVN-STR1B DRAIN	Uncapped open
7	6	HVN-V1216	TURB BLDG PUMP 1B HVN-P1B CASING VENT	Uncapped open
V16 ALTERNANTE VENT V-1217 OR 808 ALTERNATE DRAIN				

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions:

The plant is operating in Mode 1. Maintenance requested that HVN-STR1B be tagged out to clean and inspect the strainer.

Initiating Cues:

The CRS has directed you to assist in preparing a tagout to clean and inspect HVN-STR1B.

A tagging official will enter the information you provide into the tagging computer.

Sequence	Component ID	Component Name	Hang Position

RIVER
BEND STATION

Number: ***RJPM-NRC-D10-A4**
Revision: **00**

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

*** PERFORM A DOSE ASSESSMENT AND DETERMINE IF RWP IS ACCEPTABLE**

REASON FOR REVISION:

NRC Exam JPM **A4**

PREPARE / REVIEW:

John Hedgepeth	0069	8-31-2010
Preparer	KCN	Date
Angela Orgeron	1538	8-31-2010
Technical Review (SME)	KCN	Date
Scott Shultz	0176	9-9-2010
Operations Validation Facility Reviewer approval via ES-301-3	KCN	Date

* Indexing Information

TASK DESCRIPTION:	PERFORM A DOSE ASSESSMENT AND DETERMINE IF RWP IS ACCEPTABLE

TASK REFERENCE:	300157003001

K/A REFERENCE & RATING:	Generic 2.3.7 3.5

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator		Classroom	**X**

COMPLETION TIME:	15 min.

MAX TIME:	N/A

JOB LEVEL:	RO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SIMULATOR SETUP SHEET

Task Description: PERFORM A DOSE ASSESSMENT AND DETERMINE IF RWP IS ACCEPTABLE

Required Power: N/A

IC No.: N/A

Notes: **Administrative JPM that will be conducted in a classroom.**

DATA SHEET

References for Development:	Nuclear Management Manual EN-RP-105 RADIOLOGICAL WORK PERMIT
Required Materials:	Nuclear Management Manual EN-RP-105 RADIOLOGICAL WORK PERMIT
Required Plant Condition:	None
Task Standard:	Dose assessment and RWP adequacy determined.
Applicable Objectives:	N/A
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

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Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

- The Plant is operating at 100% power.
- SPC-P1A will be placed in service this shift.

Initiating Cue:

- Your shift will obtain pump bearing vibration readings.
- It will take a maximum of 20 minutes to complete this activity.
- RWP 2010-1032 has been written for this job.
- General area dose levels are shown on the survey map. SPC-P1A is the north most pump in the room
- Determine the expected dose to be received for this activity.
- Determine if the RWP is adequate for the work to be performed.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
* 1	Determine the expected dose to be received for this activity.	Determined the dose that will be received is 0.32mR/min. or 6.4 for the activity.(accept 5-8mR)		
* 2.	Review RWP 2010-1032 and determine if the RWP is adequate for the work to be performed.	Determined that the RWP is adequate for this activity	____	

Terminating Cue: Expected dose calculated and RWP determination made.

KEY

Dose to be received for this activity 5 – 8 mR

RWP is adequate ☒

RWP is **NOT** adequate ☐

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

RJPM-NRC-D10-A4

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

RJPM-NRC-D10-A4

RADIOLOGICAL WORK PERMIT

RWP Title: Replace pump seal on RWCU pump 1A			**RWP No.** 20101032
Comments:			
RWP type: Specific	**RWP Status:** Active	**Begin Date:** 07-14-2010	**Close On Date:**
Prepared By:	Keith Rockwood	**Job Supervisor:**	
Estimated Dose: 100 mrem	**Estimated Hours:** 8.00	**Actual Dose:**	**Actual Hours:**

Buildings	Elevations	Rooms
AB	70	SPC PUMP ROOM

Radiological Conditions

Description	Value	Unit
Contact RP or review current survey maps	See maps	

TASKS

Task	Description	Status
1	Isolate and Tag out SPC pump 1A	active
2	Remove and replace SPC pump 1A seal	active
3	System return to service	active
4	Obtain pump bearing vibration readings	active

Requirement Groups	Requirement Descriptions
N/A	

Instructions 1:	Pre-job briefing required.
Instructions 2:	
Instructions 3:	

Approver Title	Name	Date
ALARA	K ROCKWOOD	1/5/2010
JOB SUPERVISOR	E COVINGTON	1/6/2010
RP SUPERVISOR	W HOLLAND	1/7/2010

RJPM-NRC-D10-A4

RADIOLOGICAL WORK PERMIT

Task Number: **4**			RWP No.: 20101032 Rev: 00
Task Description: Obtain pump bearing vibration readings			Task Status: Active
Estimated Dose:		Estimated Hours: 0.3	
Hi-Rad: NO	Hot Particle: NO	Locked Hi-Rad: NO	Hi-Contamination: NO
Dose Alarm (mrem)	**20.00**	Dose Rate (mrem/hr)	**50.00**

Requirement Groups	Requirement Descriptions
ACCESS	****CRITICIAL STEP** RP approval required prior to entry**
CONTAMINATION CONTROL	**NO burning, welding, grinding, flapping, insulation removal, system breach, system draining or use of air tools allowed**
COVERAGE	**N/A**
DOSIMETRY	****CRITICIAL STEP** Periodically check your EAD. If an EAD alarm is received, place work in a safe condition and leave the area.**
	Whole body DLR and EAD required.
EXPOSURE CONTROL	**Low dose waiting areas will be discussed during the pre-job brief**
PROTECTIVE CLOTHING	**Single Anti-C's are required if no kneeling or climbing is required.**
RP INSTRUCTIONS	****CRITICIAL STEP** STOP WORK CRITERIA: Dose rate >50 mrem/hr, contamination levels >5 mrad/hr beta/gamma or > or = 1000 dpm/100cm^2 (alpha)**

RJPM-NRC-D10-A4

JPM Task Conditions/Cues
(Operator Copy)

Initial Conditions:

- The Plant is operating at 100% power.
- SPC-P1A will be placed in service this shift.

Initiating Cue:

- Your shift will obtain pump bearing vibration readings.
- It will take a maximum of 20 minutes to complete this activity.
- RWP 2010-1032 has been written for this job.
- General area dose levels are shown on the survey map. SPC-P1A is the north most pump in the room
- Determine the expected dose to be received for this activity.
- Determine if the RWP is adequate for the work to be performed.

Dose to be received for this activity _____

RWP is adequate ☐

RWP is **NOT** adequate ☐

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

DETERMINE THE TIME TO 200°F AND IF FORCED CIRCULATION IS REQUIRED

REASON FOR REVISION:

2010 NRC Exam JPM – SRO **A5**

PREPARE / REVIEW:

John Hedgepeth	0069	8/31/2010
Preparer	KCN	Date
Angie Orgeron	1538	8/31/2010
Technical Review (SME)	KCN	Date
Alfonso Croeze	0597	9/9/2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Determine the time to 200^{o}F and if forced circulation is required

TASK REFERENCE:	400077004001

K/A REFERENCE & RATING:	2.1.25, 4.2

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator		Classroom	**X**

COMPLETION TIME:	15 min.

MAX TIME:	N/A

JOB LEVEL:	SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SIMULATOR SETUP SHEET

Task Description: Determine the time to 200^{o}F and if forced circulation is required

Required Power: N/A

IC No.: N/A

Notes: **Administrative JPM that will be conducted in a classroom.**

DATA SHEET

References for Development:	OSP-0037, Shutdown Operations Protection Plan (SOPP) Rev.23 SOP-0003 REACTOR RECIRCULATION SYSTEM
Required Materials:	OSP-0037, Shutdown Operations Protection Plan (SOPP) Rev.23 (graphs only) SOP-0003 REACTOR RECIRCULATION SYSTEM
Required Plant Condition:	N/A
Task Standard	Used OSP-0037 to determine the time to 200^{o}F and made the determination regarding Recirc pumps in accordance with the attached key.
Applicable Objectives:	
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

You are currently in day 15 of a forced outage.

Shutdown cooling is being maintained by RHR 'B' through the Heat Exchanger, recirculation pump A is tagged out for seal replacement that is expected to start next shift. Recirculation pump B is running in slow speed with the FCV at 94% open.

SPC-P1B is tagged out
SPC-P1A and RHR-P1A are out of service due to electrical bus outage.
Reactor Water temperature is 130^{o}F
The water level in the Reactor is about 85 inches.

The first reactor head bolt will be de-tensioned within an hour.

Initiating Cue:

A bus fault has resulted in a loss of power to RHR 'B'. The OSM has directed you to determine time to 200^{o}F and if Reactor Recirc. Pump can be secured at this time.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
*_____1.	Determine which curve group to use. Before Fuel Shuffle or After Fuel Shuffle.	Used the information provided, determined that Fuel Movement has not started.	____	
*_____2.	Determine Reactor Water Level: • 36 inches • 85 inches • Main Steam Lines • Reactor Flange • Flooded	Using the information provided that the reactor water level is about 85 inches.	____	
*_____3.	Locate Day 15 on Attachment 9 page 4 of 32, Time to 200F curve before fuel shuffle for reactor water level about 85 inches and Rx water Temperature 110.	Determine from the graph that for Day 15, it will take **2.1 hours (± 0.05 hours)** for temperature to rise from 110°F to 200°F	____	
*_____4.	Use the appropriate Multiplier for an initial temperature of 130°F	Determine from the table in the lower right of the graph that the multiplier for Temp 130°F is **0.77**	____	Note: Because the initial temperature is closer to 200F it will take less time to get to 200F, so a multiplier is used.
*_____5.	Multiply 2.1 hours by 0.77	Answer range of 1.57 to 1.65 hours is correct	____	
*_____6.	Determine that Recirc pump cannot be secured.	Time to 200°F is < 2 hours	____	SOP-003 Section 6.0 NOTE

Terminating Cue: Time to 200°F and recirculation limitations determined.

KEY

Time to 200^{o}F __1.57 to 1.65 hours_____

Can Recirc. Pump be secured? YES ☐

NO ☒

RJPM-NRC-D10-A5

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

RJPM-NRC-D10-A5

JPM Task Conditions/Cues
(Operator Copy)

Initial Conditions:

You are currently in day 15 of a forced outage.

Shutdown cooling is being maintained by RHR 'B' through the Heat Exchanger, recirculation pump A is tagged out for seal replacement that is expected to start next shift. Recirculation pump B is running in slow speed with the FCV at 94% open.

SPC-P1B is tagged out
SPC-P1A and RHR-P1A are out of service due to electrical bus outage.
Reactor Water temperature is 130^{o}F
The water level in the Reactor is about 85 inches.

The first reactor head bolt will be de-tensioned within an hour.

Initiating Cues:

A bus fault has resulted in a loss of power to RHR 'B'. The OSM has directed you to determine time to 200^{o}F and if Reactor Recirc. Pump can be secured at this time.

Time to 200^{o}F _____

Can Recirc. Pump be secured? YES ☐

NO ☐

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

*** DETERMINE IF SHIFT STAFFING REQUIREMENTS ARE MET**

REASON FOR REVISION:

NRC Exam JPM **A6**

PREPARE / REVIEW:

Angie Orgeron	1538	8/26/2010
Preparer	KCN	Date
John Hedgepeth	0069	8/26/2010
Technical Review (SME)	KCN	Date
Alfonso Croeze	0597	9/9/2010
Operations Validation Facility Reviewer approval via ES-301-3	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Determine if shift staffing requirements are met.

TASK REFERENCE:	300071003003

K/A REFERENCE & RATING:	2.1.5 IR 3.9

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator		Classroom	**X**

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SIMULATOR SETUP SHEET

Task Description: Determine if shift staffing requirements are met.

Required Power: N/A

IC No.: N/A

Notes: **Administrative JPM that will be conducted in a classroom.**

DATA SHEET

References for Development:	EN-OP-115, Conduct of Operations
Required Materials:	EN-OP-115, Conduct of Operations
Required Plant Condition:	None
Task Standard	Determined that EN-OP-115 requirements are not met and that Stone must be the ATC operator.
Applicable Objectives:	RLP-OPS-H0206 Obj 6, 7
Safety Related Task:	No
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

The plant is in Mode 1 at 100%. No significant evolutions are in progress.

Initiating Cue:

An operator scheduled for the next shift has called in to report that he will not be at work due to illness. The following individuals are scheduled for the shift and will be reporting as scheduled. Determine if minimum staffing requirements of EN-OP-115 are met and determine which of the operators must stand the "at the controls" (ATC) position.

Branscum		OSM	
McLean		CRS/STA	
Parker		STA	
Stone		NCO	
Coykendall		NCO	FBL
Duncan	Fully qualified	SNEO	FBM
Howell	Fully qualified	SNEO	FBM
Dugar	O, T, RW, R	SNEO	FBM
Bordelon	O,T,RW	SNEO	FBM
Seymour	O,T,R	SNEO	FBM

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
*_____1.	Compare available personnel and qualifications to EN-OP-115 requirements.	Candidate reviewed available personnel and EN-OP-115 requirements and determine: 1) Requirements were not met. 2) Stone must stand the ATC position.	_____	*EN-OP-115 requirements are not met due to only 2 NCOs being present. The assistant Ops Manager may approve a deviation from this requirement since Technical Specification minimum staffing is met.* *Stone must stand the ATC position because Coykendall is the only Fire Brigade Leader. The Fire Brigade Leader may not stand the ATC position due to the potential of leaving the control room for fire response.*

Terminating Cue: Candidate has determine that EN-OP-115 requirements are not met and that NCO Stone must stand the at the controls (ATC) position.

RJPM-NRC-D10-A6

ANSWER KEY

Initial Conditions: The plant is in Mode 1 at 100%. No significant evolutions are in progress.

Initiating Cues: An operator scheduled for the next shift has called in to report that he will not be at work due to illness. The following individuals are scheduled for the shift and will be reporting as scheduled.

Determine if minimum staffing requirements of EN-OP-115 are met and determine which operator must stand the "at the controls" (ATC) position.

Record your responses below.

Branscum		OSM	
McLean		CRS/STA	
Parker		STA	
Stone		NCO	
Coykendall		NCO	FBL
Duncan	Fully qualified	SNEO	FBM
Howell	Fully qualified	SNEO	FBM
Dugar	O, T, RW, R	SNEO	FBM
Bordelon	O,T,RW	SNEO	FBM
Seymour	O,T,R	SNEO	FBM
McCartney	O,T,RW	SNEO	FBM

EN-OP-115 Requirements: MET ☐ / NOT MET ☑ (Select One)

ATC Operator: STONE

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

RJPM-NRC-D10-A6

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

RJPM-NRC-D10-A6

JPM Task Conditions/Cues
(Operator Copy)

Initial Conditions: The plant is in Mode 1 at 100%. No significant evolutions are in progress.

Initiating Cues: An operator scheduled for the next shift has called in to report that he will not be at work due to illness. The following individuals are scheduled for the shift and will be reporting as scheduled.

Determine if minimum staffing requirements of EN-OP-115 are met and determine which operator must stand the "at the controls" (ATC) position.

Record your responses below.

Branscum		OSM	
McLean		CRS/STA	
Parker		STA	
Stone		NCO	
Coykendall		NCO	FBL
Duncan	Fully qualified	SNEO	FBM
Howell	Fully qualified	SNEO	FBM
Dugar	O, T, RW, R	SNEO	FBM
Bordelon	O,T,RW	SNEO	FBM
Seymour	O,T,R	SNEO	FBM
McCartney	O,T,RW	SNEO	FBM

EN-OP-115 Requirements: MET ☐ / NOT MET ☐ (Select One)

ATC Operator _____

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

***REVIEW A TAGOUT OF LOS-STR1, TURBINE LUBE OIL SUCTION HEADER STRAINER**

REASON FOR REVISION:

2010 NRC Exam JPM **A7**

PREPARE / REVIEW:

John Hedgepeth	0069	8/31/2010
Preparer	KCN	Date
Angie Orgeron	1538	8/31/2010
Technical Review (SME)	KCN	Date
Alfonso croeze	0597	9/9/2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	REVIEW A TAGOUT OF LOS-STR1, TURBINE LUBE OIL SUCTION HEADER STRAINER

TASK REFERENCE:	300095003001

K/A REFERENCE & RATING:	2.2.13 4.3

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator		Classroom	**X**

COMPLETION TIME:	15 min.

MAX TIME:	N/A

JOB LEVEL:	SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	Yes

SIMULATOR SETUP SHEET

Task Description: REVIEW A TAGOUT OF LOS-STR1, TURBINE LUBE OIL SUCTION HEADER STRAINER

Required Power: N/A

IC No.: N/A

Notes: **Administrative JPM that will be conducted in a classroom.**

DATA SHEET

References for Development:	PID-16-03a PID-16-12A SOP-0012 Main Turbine Lube Oil System
Required Materials:	PID-16-03a PID-16-12A SOP-0012 Main Turbine Lube Oil System
Required Plant Condition:	N/A
Task Standard	Reviewed the prepared tagout and determined that it is not acceptable.
Applicable Objectives:	ELP-OPS-CLR, Obj. 10
Safety Related Task:	NA
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator is NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

A tagout has been developed to support the cleaning and inspecting of the turbine lube oil suction header strainer LOS-STR1.

Initiating Cue:

As part of your outage support activities you have been given a tagout to support the cleaning and inspecting of the turbine lube oil suction header strainer LOS-STR1 for approval. Review the tagout and determine if it should be approved, and if not, why.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
__*__ 1.	Review the turbine lube oil suction header strainer LOS-STR1 tagout for approval.	DO NOT APPROVE THE TAGOUT for the following reason: 1. The placement sequence for all tags is 1. This is incorrect.	____	

Terminating Cue: The candidate has made a determination of the inadequacy of the tagout.

KEY

APPROVED ☐

DISAPPROVED ☒

If disapproved, WHY? The placement sequence for all tags is 1.

RJPM-NRC-D10-A7

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

RJPM-NRC-D10-A7

JPM Task Conditions/Cues
(Operator Copy)

Initial Conditions: A tagout has been developed to support the cleaning and inspecting of the turbine lube oil suction header strainer LOS-STR1.

Initiating Cues: As part of your outage support activities you have been given a tagout to support the cleaning and inspecting of the turbine lube oil suction header strainer LOS-STR1 for approval. Review the tagout and determine if is should be approved, and if not, why.

APPROVED ☐

DISAPPROVED ☐

If disapproved, WHY? _____

_____

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

***REVIEW A LIQUID RADWASTE RELEASE PERMIT ISSUED BY CHEMISTRY**

REASON FOR REVISION:

2010 NRC Exam JPM **A8**

PREPARE / REVIEW:

John Hedgepeth	0069	8/31/2010
Preparer	KCN	Date
Angie Orgeron	1538	8/31/2010
Technical Review (SME)	KCN	Date
Alfonso Croeze	0597	9/9/2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	REVIEW A LIQUID RADWASTE RELEASE PERMIT ISSUED BY CHEMISTRY

TASK REFERENCE:	300174003002

K/A REFERENCE & RATING:	2.3.6 3.8

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator		Classroom	**X**

COMPLETION TIME:	15 min.

MAX TIME:	N/A

JOB LEVEL:	SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SIMULATOR SETUP SHEET

Task Description: **REVIEW A LIQUID RADWASTE RELEASE PERMIT ISSUED BY CHEMISTRY**

Required Power: **N/A**

IC No.: **N/A**

Notes: **Administrative JPM that will be conducted in a classroom.**

DATA SHEET

References for Development:	CSP-0110 Radioactive Liquid Effluent Batch Discharge ADM-0054, Radioactive Liquid Effluent Batch Discharge
Required Materials:	CSP-0110 Radioactive Liquid Effluent Batch Discharge ADM-0054, Radioactive Liquid Effluent Batch Discharge
Required Plant Condition:	N/A
Task Standard	Reviewed the discharge permit and approved for discharge.
Applicable Objectives:	
Safety Related Task:	NA
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator is NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

LWS-TK4D, Recovery Sample Tank, is ready for discharge. RMS-RE107 is operable.

Initiating Cue:

Chemistry has brought discharge permit 2010004 to you for authorization. Review the permit and either authorize it or determine why it should not be authorized. Explain your decision.

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
* 1.	Review the discharge permit for authorization.	Discharge permit 2010004 should be authorized. • All data is correct, no typographically errors • The RMS-RE107 alarm and alert setpoints on page 1 and page three agree		

Terminating Cue: Discharge permit has been authorized by the SRO.

.

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

RJPM-NRC-D10-A8

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

RJPM-NRC-D10-A8

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: LWS-TK4D, Recovery Sample Tank, is ready for discharge.

RMS-RE107 is operable.

Initiating Cues: Chemistry has brought discharge permit 2010004 to you for authorization. Review the permit and either authorize it or determine why it should not be authorized. Explain your decision.

EOI – RIVER BEND STATION
RADIOACTIVE LIQUID EFFLUENT DISCHARGE
PERMIT No.: 2010004

I. DISCHARGER AUTORHIZATION

LWS-TK4: D LWS-P4: C Sample Date/Time: 08/31/2010 10:00

Recirculation Start Date/Time: 08/31/2010 07:35

LWS-FV197 Control Setpoint (Max.): 40 gpm

Diluted Pre-Release ECL Fraction: 3.41E-02 (<1.000)

Calculated RMS-RE 107 Setpoints:
Alarm: 1.99E-03 uCi/ml
Alert: 1.79E-03 uCi/ml

CH.13 Background: 3.35E+03 cpm

Blowdown Rate (Min.): > 2200 gpm

Diluted Pre-Release Gaseous Act. 2.93E-07 uCi/ml (<2.00e-4)

Chemistry Authorization: _____Wayne Hillard_____ KCN: _1234 Date/Time: _8-31-2010 / 1700

Chemistry Authorization: _____N/A_____ KCN: __N/A__ Date/Time: __N/A_____
(Two authorizations required when monitor inoperable)

SS/CRS Discharge Authorization: _____ KCN: _____ Date/Time: _____

II. DISCHARGE RECORD

	Init. / KCN
RMS-RE107 Source Check Completed:	_____ / _____
RMS-RE107 Sample Pump Started Running:	_____ / _____
Alarm Setpoint Entered:	_____ / _____
Alert Setpoint Entered:	_____ / _____
CH.13 Background Setpoint Entered:	_____ / _____
Sample Pump Operability Check:	_____ / _____
LWS-FE197 Operability Check:	_____ / _____
Valve Lineup Performed:	_____ / _____
Valve Lineup Verified:	_____ / _____

(Two verifications required only when monitor inoperable)

	Date	Time	LWS-FE197 (gpm)	CWS-FE113 (gpm)	Init. / KCN
Start:	_____	_____	_____	_____	_____
Stop:	_____	_____	_____	_____	_____

Total Tank Volume Released (gal) _____

III. POST RELEASE DATA

Composite Updated (ml) _____

Completed: _____ / _____ / _____
Signature KCN Date

Reviewed: _____ / _____ / _____
Signature KCN Date

Total Pages Attached_____

LIQUID PRE-RELEASE PERMIT REPORT

Permit Number: 2010004

Release Point: 1 Radwaste System

Release Mode: 2 Batch

Status: P Pre-Release

Comments:

= = = PRE-RELEASE DATA =

Estimated start date / time -- 08/31/10 10:20
Estimated end date / time -- 08/31/10 17:35
Estimated release duration (minutes) -- 4.25E+02

Cooling Tower Blowdown flowrate (gpm) -- 2.20E+03

Release volume (gal) -- 1.70E+04
Release flowrate (gpm) --- 4.00E+01

LWS-FV197 Control Setpoint (Max.) (gpm) --- 40
Diluted Pre-release ECL Fraction (<1.0) --- 3.41E-02

RMS-RE107 Operable? -- Operable
Current Monitor Background (cpm) --- 3.47E+03
Lowest 10 Minute Trend Background (uCi/mL) --- 1.79E-06
Alarm Setpoint (uCi/mL) -- 1.99E-03
Alert Setpoin (uCi/mL) -- 1.79E-03

Channel-13 Background (cpm) -- 3.35E+03

Tank -- D
Pump --- C
Recirculation Start Date -- 08/31/2010 07:35
Sample Date --- 08/31/2010 10:00

LIQUID PRE-RELEASE PERMIT REPORT

Permit Number: 2010004

Release Point: 1 Radwaste System

Release Mode: 2 Batch

Status: P Pre-Release

= = = = NUCLIDE DATA (INITIAL) =

Nuclide	Undiluted uCi/ml	EC	Ratio to EC	Ratio to 10*EC	Diluted uCi/ml	Ratio to EC	Ration to 10*EC
MN-54	3.07E-07	3.00E-05	1.02E-02	1.02E-03	5.48E-09	1.83E-04	1.83E-05
CO-60	7.53E-07	3.00E-06	2.51E-01	2.51E-02	1.34E-08	4.48E-03	4.48E-04
Gamma	1.06E-06		2.61E-01	2.61E-02	1.89E-08	4.66E-03	4.66E-04
H-3	1.87E-02	1.00E-03	1.87E+01	1.87E+00	3.34E-04	3.34E-01	3.34E-02
FE-55	6.04E-06	1.00E-04	6.04E-02	6.04E-03	1.08E-07	1.08E-03	1.08E-04
Beta	1.87E-02		1.88E+01	1.88E+00	3.34E-04	3.35E-01	3.35E-02
XE-135	1.29E-05	2.00E-04	6.45E-02	6.45E-03	2.30E-07	1.15E-03	1.15E-04
XE-133	3.46E-06	2.00E-04	1.73E-02	1.73E-03	6.18E-08	3.09E-04	3.09E-05
O&EG	1.64E-05		8.18E-02	8.18E-03	2.92E-07	1.46E-03	1.46E-04
Total	1.87E-02		1.91E+01	1.91E+00	3.34E-04	3.41E-01	3.41E-02

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

DETERMINE PROTECTIVE ACTION RECOMMENDATIONS

REASON FOR REVISION:

2010 NRC Exam JPM - **A9**

PREPARE / REVIEW:

John Hegdepeth	0069	8/31/2010
Preparer	KCN	Date
Angie Orgeron	1538	8/31/2010
Technical Review (SME)	KCN	Date
Alfonso Croeze	0597	9/9/2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Determine Protective Action Recommendations

TASK REFERENCE:	301016005003

K/A REFERENCE & RATING:	2.4.44 4.4

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator		Classroom	**X**

COMPLETION TIME:	15 min.

MAX TIME:	15 min

JOB LEVEL:	SRO

TIME CRITICAL:	Yes

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SIMULATOR SETUP SHEET

Task Description: Determine Protective Action Recommendations.

Required Power: N/A

IC No.: N/A

Notes: **Administrative JPM that will be conducted in a classroom.**

DATA SHEET

References for Development:	EIP-2-007, Protective Action Recommendation Guidelines
Required Materials:	EIP-2-007, Protective Action Recommendation Guidelines
Required Plant Condition:	N/A
Task Standard:	An upgraded Protective Action Recommendation has been issued within 15 minutes
Applicable Objectives:	EP-42.12, Obj. 11
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

The plant has experienced a loss of offsite power. Div III D/G did not start. RCIC tripped on over speed. Main steam tunnel temperature is above 200 deg. F. The Main plant exhaust activity level has been reading greater than the General Emergency level for 15 minutes.

Initiating Cue:

As acting Recovery Manager, dose projections and meteorological information were just handed to you. Complete a Notification of General Emergency short form and make Protective Action Recommendations.

THIS IS A TIME CRITICAL JPM

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
*_____1.	Use (EIP-2-007) Attachments 1, 2, and 3 to formulate Protective Action Recommendations (PARs).	Start Time begins when the JPM Task Conditions / Cues is handed to the candidate **START TIME: _____** Candidate requested copy of EIP-2-007, Protective Action Recommendations.	_____	CUE: When requested, provide a copy of EIP-2-007 to candidate.
*_____2.	Determines PARs are required.	Candidate determined that a PAR is required using Attachment 2, PAR Flowchart Block 1.	_____	
*_____3.	Protective Action Recommendations must be developed within 15 minutes of receipt of data.	**Candidate completed GE Short Form that matches answer key using Attachment 3 Block 1 and dose assessment and meteorological data.** **TERMINATION TIME: _____** Must be completed in 15 minutes or less **Time to complete: _____**	_____	**Current Date/Time and Message Number are not required for Satisfactory performance. This information is computer generated.**

Terminating Cue: Notification of General Emergency short form completed.

ANSWER KEY

PAR BLOCK # _____1_____

Notification of General Emergency			
Time/Date: Current time / date			Message:
This is River Bend Station A General Emergency was declared at			
Declaration time	on	Declaration date	for
AG 1-2 VALID reading on one or more radiation monitors in Table R1 that exceeds or is expected to exceed GENERAL EMERGENCY reading for greater than or equal to 15 minutes			
Wind from ___330___ Deg.		At ___2.1___ MPH	
○ No Release		PAR Reference Scenario No.:	5
○ Release BELOW federally approved operating limits			
☒ Release ABOVE federally approved operating limits			
Authorized by:		Title:	

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: The plant has experienced a loss of offsite power. Div III D/G did not start. RCIC tripped on over speed. Main steam tunnel temperature is above 200 deg. F. The Main plant exhaust activity level has been reading greater than the General Emergency level for 15 minutes.

Initiating Cues: As acting Recovery Manager, dose projections and meteorological information were just handed to you. Complete a Notification of General Emergency short form and make Protective Action Recommendations.

THIS IS A TIME CRITICAL JPM

DOSE ASSESSMENT for Emergency Containment Venting

DOSE RATE CALCULATIONS

TEDE Dose (REM):		CDE Dose (REM) Thyroid:	
Site Boundary	3.95E1	Site Boundary	6.02E-1
2 Miles	6.49E0	2 Miles	1.06E-1
5 Miles	9.08E-1	5 Miles	2.44E-2
10 Miles	2.02E-1	10 Miles	7.55E-3

Meteorological Data

Wind Speed	2.1 mph	Wind Direction	330 deg.
Delta T	$-0.8^{o}F$	Stability Class	D

JPM Task Conditions/Cues
(Operator Copy)

PAR BLOCK # _____

Notification of General Emergency
Time/Date: Current time / date Message:
This is River Bend Station
A General Emergency was declared at
Declaration time on Declaration date for
AG 1-2 VALID reading on one or more radiation monitors in Table R1 that exceeds or is expected to exceed GENERAL EMERGENCY reading for greater than or equal to 15 minutes
Wind from_____ Deg. At_____ MPH
○ No Release PAR Reference Scenario No.:
○ Release BELOW federally approved operating limits
○ Release ABOVE federally approved operating limits
Authorized by: Title:

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

Defeat RWCU Level 2 and SLC Isolation Interlocks

REASON FOR REVISION:

D 2010 NRC Exam JPM **C1**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-14-2010
Technical Review (SME)	KCN	Date
Alfonso Croeze	0597	9-14-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Defeat RWCU Level 2 and SLC Isolation Interlocks

TASK REFERENCE:	200087005001

K/A REFERENCE & RATING:	223002 A4.03 3.6 / 3.5

TESTING METHOD:	Simulate Performance	X			Actual Performance	
	Control Room	X	Simulator		In-Plant	

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SAFETY FUNCTION	5

SIMULATOR SETUP SHEET

Task Description:

Required Power:

IC No.:

Notes: NONE: This JPM is performed in the control room.

DATA SHEET

References for Development:	EOP-005 ENCLOSURE 4
Required Materials:	EOP-005 ENCLOSURE 4
Required Plant Condition:	ANY
Task Standard	All four jumper locations identified.
Applicable Objectives:	HLO-516, Obj. 1
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions: The plant is in an ATWS condition and the turbine has tripped. Reactor pressure is not stable.

Initiating Cue: The CRS has directed you to install EOP-005 Enclosure 4 to defeat RWCU level 2 and SLC isolations.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
* 1.	3.1 OBTAIN EOP-0005 ENCL 4 jumper kit from the Control Room Emergency Locker.	Jumper kit No. 4 obtained from the Control Room Emergency Locker		
2.	3.1.1 INSPECT kit for 4 jumpers	Inspected for four jumpers		CUE: Inform the candidate that the four jumpers are obtained.
3.	3.2 DEFEAT the SLC Pump A isolation interlock as follows:		N/A	
4.	3.2.1 Location: H13-P623 Affected Terminal Board: TB0033	Located TB0033 in P623		TB0033 is in H13-P623 right side of panel, 1st column of terminal boards from panel door, 3rd terminal board from top.
* 5.	3.2.1.1 Jumper No. 1 JUMPER Terminal 1 on TB0033 to Terminal 2 on TB0033	Terminal 1 on TB0033 and Terminal 2 on TB0033 properly identified for jumper placement		CUE: Inform the candidate that the jumper is installed.
6	3.3 DEFEAT the SLC Pump B isolation interlock as follows:		N/A	

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____7	3.3.1 Location: H13-P622 Affected Terminal Board: TB0030	Located TB0030 in P622	____	TB0030 is in H13-P622 right side of panel, 2nd column of terminal boards from the panel door, 6th terminal board from top.
*_____8	3.3.1.1 Jumper No. 2 JUMPER Terminal 1 on TB0030 to Terminal 2 on TB0030	Terminal 1 on TB0030 and Terminal 2 on TB0030 properly identified for jumper placement.	____	CUE: Inform the candidate that the jumper is installed.
_____9	3.4 DEFEAT the RWCU RPV Water Level 2 isolation interlocks as follows:		N/A	
_____10	3.4.1 Location: H13-P691 Bay A Affected Terminal Board: TB0023	Located TB0023 in P691 Bay A	____	Right side of bay, 2nd column of terminal boards from bay door, 3rd terminal board from top
*_____11	3.4.1.1 Jumper No. 3 JUMPER Terminal 12 on TB0023 to Terminal 13 on TB0023	Terminal 12 on TB0023 and Terminal 13 on TB0023 properly identified for jumper placement.	____	CUE: Inform the candidate that the jumper is installed.
_____12	3.4.2 Location: H13-P692 Bay A Affected Terminal Board: TB0014	Located TB0014 in P692 Bay A	____	Right side of bay, 2nd column of terminal boards from bay door, 6th terminal board from top

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
* 13	3.4.2.1 Jumper No. 4 JUMPER Terminal 10 on TB0014 to Terminal 11 on TB0014	Terminal 10 on TB0014 and Terminal 11 on TB0014 properly identified for jumper placement.		CUE: Inform the candidate that the jumper is installed.
14	3.5 Return RWCU to service as directed by the CRS	Requested direction from the CRS		CUE: Inform the candidate that another operator will return RWCU to service.

Terminating Cue: Four jumpers installed per EOP-005 enclosure #4

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: The plant is in an ATWS condition and the turbine has tripped. Reactor pressure is not stable.

Initiating Cues: The CRS has directed you to install EOP-005 Enclosure 4 to defeat RWCU level 2 and SLC isolations.

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

Stuck open SRV fuse removal, SRV B21-F051B

REASON FOR REVISION:

D 2010 NRC Exam JPM **C2**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-14-2010
Technical Review (SME)	KCN	Date
Scott Dallas	1385	9-14-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Stuck open SRV fuse removal, SRV B21-F051B

TASK REFERENCE:	400059004001, 400061004001

K/A REFERENCE & RATING:	239002 K2.01 2.8/3.2 239002 K4.08 3.6/3.7 239002 K5.01 3.4/3.5 239002 A4.01 4.4/4.4

TESTING METHOD:	Simulate Performance	X			Actual Performance	
	Control Room	X	Simulator		In-Plant	

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SAFETY FUNCTION	3

SIMULATOR SETUP SHEET

Task Description:

Required Power:

IC No.:

Notes: NONE: This JPM is performed in the control room.

DATA SHEET

References for Development:	AOP-0035, Safety Relief Valve Stuck Open
Required Materials:	AOP-0035 Attachment 1, Safety Relief Valves Solenoid Circuit Fuses.
Required Plant Condition:	ANY
Task Standard	Fuses required to be removed have been properly identified.
Applicable Objectives:	RLP-OPS-AOP035 OBJ 7
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

SRV B21-F051B has opened.

- Reactor pressure is normal
- Immediate operator actions for AOP-0035 have been completed.
- Reactor power is steady at 89%.
- Attempts to close B21-RV-F051B from panels H13-P601 and H13-P631 have been unsuccessful.

Initiating Cue:

The CRS has directed you to deenergize the solenoids of SRV B21-RV-F051B, by pulling the applicable fuses listed in Attachment 1, Safety Relief Valves Solenoid Circuit Fuses of AOP-0035.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____1.	5.6 IF the SRV is still open, THEN deenergize the solenoids by pulling the applicable fuses listed in Attachment 1, Safety Relief Valves Solenoid Circuit Fuses.		N/A	
_____2.	5.6 Locate H13-P628 Bay A	Panel P628 Bay A has been properly located.	____	H13-P628 Bay A, is located south end control room, west side.
*_____3.	5.6 Remove fuse B21C-F81A on fuse block 9H13	Fuse B21C-F81A has been properly identified for removal.	____	**CUE**: Inform the candidate that the fuse has been removed.
*_____4.	5.6 Remove fuse B21C-F82A on fuse block 9H14	Fuse B21C-F82A has been properly identified for removal.	____	**CUE:** Inform the candidate that the fuse has been removed. If requested, after the fuses have been removed, The ATC operator reports SRV B21-F051B is still open.
_____5.	5.6 Locate H13-P631 Bay A	Panel P631 Bay A has been properly located.	____	H13-P631 Bay A, is located south end control room, east side.
*_____6	5.6 Remove fuse B21C-F81B on fuse block 9H13	Fuse B21C-F81B has been properly identified for removal.	____	**CUE**: Inform the candidate that the fuse has been removed.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
* 7	5.6 Remove fuse B21C-F82B on fuse block 9H14	Fuse B21C-F82B has been properly identified for removal.		**CUE:** Inform the candidate that the fuse has been removed. If requested after the fuses have been removed, The ATC operator announces SRV B21-F051B has closed.

Terminating Cue: Four fuses for SRV B21-F051B removed per AOP-0035

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: SRV B21-F051B has opened.

- Reactor pressure is normal
- Immediate operator actions for AOP-0035 have been completed.
- Reactor power is steady at 89%.
- Attempts to close B21-RV-F051B from panels H13-P601 and H13-P631 have been unsuccessful.

Initiating Cues: The CRS has directed you to deenergize the solenoids of SRV B21-RV-F051B, by pulling the applicable fuses listed in Attachment 1, Safety Relief Valves Solenoid Circuit Fuses of AOP-0035.

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

LINE UP FIRE WATER PROTECTION SYSTEM FOR RPV INJECTION

REASON FOR REVISION:

D 2010 NRC Exam JPM **P1**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-14-2010
Technical Review (SME)	KCN	Date
Alfonso Croeze	0597	9-14-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	LINE UP FIRE WATER PROTECTION SYSTEM FOR RPV INJECTION EOP-005 ENCLOSURE 7

TASK REFERENCE:	286001005004

K/A REFERENCE & RATING:	286000	K1.03	2.9 / 3.0

TESTING METHOD:	Simulate Performance	X			Actual Performance	
	Control Room		Simulator		In-Plant	x

COMPLETION TIME:	20 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SAFETY FUNCTION	8

SIMULATOR SETUP SHEET

Task Description:

Required Power:

IC No.:

Notes: NONE: This JPM is performed in the plant.

DATA SHEET

References for Development:	EOP-005 Enclosure 7
Required Materials:	EOP-005 Enclosure 7
Required Plant Condition:	ANY
Task Standard	Simulated opening the four required valves to inject with fire water.
Applicable Objectives:	HLO-516 Objective 1
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

While operating at 100 percent power the plant has experienced a scram. RCIC and HPCS have tripped, and efforts are in progress to restore RCIC. The diesel-powered fire water pumps are running. RHR A is in suppression pool cooling and RHR B is secured.

Initiating Cue:

The CRS has directed you to perform EOP-005 Enclosure 7 INJECTION INTO RPV WITH FIRE SYSTEM step 3.6 for the Fuel Building and Auxiliary Building ONLY.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____1.	3.6 OPEN (UNLOCK if necessary) the following Fire Protection/Service Water Inlet Valves.		N/A	
(Fuel Bldg EL 74 ft. SW corner each side of Check Valve SWP-V973)				
*_____2.	3.6.1 FPW-V396, ISOLATION VALVE FOR SWP BACKUP TO FUEL BLDG HOSE RACKS	Opened FPW-V396 by turning the handwheel in the counterclockwise direction until valve motion stopped.	_____	CUE: Valve motion has stopped at the open backseat and the valve stem is fully extended.
*_____3.	3.6.2 SWP-V971, DIV 2 STBY SWP TO FUEL BLDG FIRE PROT ISOL VLV	Unlocked and opened SWP-V971 by turning the handwheel in the counterclockwise direction until valve motion stopped.	_____	CUE: Valve motion has stopped at the open backseat and the valve stem is fully extended.
(Aux. Bldg EL 100 ft. crescent area NE corner each side of Check Valve SWP-V964)				
*_____4.	3.6.1 FPW-V321, SWP BACKUP TO RB AND AUX BLDG HOSE RACKS ISOLATION VALVE	Opened FPW-V321 by turning the handwheel in the counterclockwise direction until valve motion stopped.	_____	CUE: Valve motion has stopped at the open backseat and the valve stem is fully extended.
*_____5.	3.6.2 SWP-V968, SVCE WTR TO FIRE PROTECTION MAN ISOL VLV	Unlocked and opened SWP-V968 by turning the handwheel in the counterclockwise direction until valve motion stopped.	_____	CUE: Valve motion has stopped at the open backseat and the valve stem is fully extended..

Terminating Cue: Four FPW to SWP valves have been opened per EOP-005 Enclosure 7

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: While operating at 100 percent power the plant has experienced a scram. RCIC and HPCS have tripped, and efforts are in progress to restore RCIC. The diesel-powered fire water pumps are running. RHR A is in suppression pool cooling and RHR B is secured.

Initiating Cues: The CRS has directed you to perform EOP-005 Enclosure 7 INJECTION INTO RPV WITH FIRE SYSTEM step 3.6 for the Fuel Building and Auxiliary Building ONLY.

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

Restore RPS B Normal Power Supply

REASON FOR REVISION:

D 2010 NRC Exam JPM **P2**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-14-2010
Technical Review (SME)	KCN	Date
Alfonso Croeze	0597	9-14-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Restore RPS B Normal Power Supply

TASK REFERENCE:	212004001004

K/A REFERENCE & RATING:	212000 K1.04, 3.4/3.6 212000 K2.01, 3.2/3.3 212000 A1.01, 2.8/2.9 212000 A2.01, 3.7/3.9

TESTING METHOD:	Simulate Performance	X			Actual Performance	
	Control Room		Simulator		In-Plant	X

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	Yes

SAFETY FUNCTION	7

SIMULATOR SETUP SHEET

Task Description:

Required Power:

IC No.:

Notes: NONE: This JPM is performed in the plant.

DATA SHEET

References for Development:	SOP-0079, Reactor Protection System
Required Materials:	SOP-0079, Reactor Protection System Section 5.3
Required Plant Condition:	Any
Task Standard	RPS M/G set running at rated voltage
Applicable Objectives:	RLP-STM-0508 OBJ 3f
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

The plant is at 100% power. Electrical maintenance has completed work on the RPS B MG set generator output breaker. RPS B Bus is being supplied from the Alternate Power Supply.

Initiating Cue:

The CRS has directed you to restore the B RPS MG set and close the appropriate breakers to make RPS Bus B ready to transfer to the Normal Supply, in accordance with SOP-0079, Reactor Protection System.

*** Denotes <u>Critical Step</u>**
^ Denotes <u>Sequence Critical</u>
(<u>must</u> be performed after previous step marked ^)

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____1.	5.3.1.1 At NHS-MCC10B, close BKR 1C, REACTOR PROT SYSTEM MOTOR GENERATOR SET	Closed NHS-MCC10B Breaker 1C by moving handle all the way to left.	____	**CUE:** Breaker BKR 1C is closed.
*_____2.	5.3.1.2.1 At MG Set Panel C71-S001B, depress the MOTOR ON pushbutton while observing the Motor Generator Set output voltmeter	MOTOR ON pushbutton depressed as motor generator comes up to proper voltage.	____	**CUE:** MG status lights above motor control pushbuttons are Green light OFF Red light ON AND Generator Output voltage is rising.
_____3.	5.3.1.2.2 IF the Motor Generator Set output voltmeter does not increase to and stabilize at >123.5 volts	Verify Motor Generator Set output voltmeter stabilizes at ≥ 123.5 volts.	____	**CUE:** 15 minutes have elapsed and MG Set output voltmeter indicates less than123.5 volts.
*_____4.	5.3.1.2.2 **ALTERNATE PATH** THEN depress the Motor Generator Set MOTOR ON pushbutton to reset the over excitation trip and allow the Motor Generator Set to self-excite.	MOTOR ON pushbutton depressed to reset the over excitation trip and allow the Motor Generator Set to self-excite.	____	**CUE:** MG Set output voltmeter indicates 125 volts.
*_____5.	5.3.1.3 WHEN the MG Set output voltmeter is ≥ 123.5 volts, THEN at C71-S001B, close the Generator Output Breaker.	Generator Output Breaker on C71-S001B closed by moving it to the upper position.	____	**CUE:** Generator Output Breaker is Closed.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
*_____6.	5.3.1.4 Close C71-S003B, MG SET LOAD BREAKER	EPA Breaker C71-S003B closed by rotating breaker lever to the ON (fully counter-clockwise) position	____	**CUE:** EPA Breaker C71-S003B EPA OUTPUT red light ON: POWER SUPPLY OUTPUT - Red light ON
*_____7.	5.3.1.5 Close C71-S003D, RPS BUS B NORMAL SUPPLY Breaker.	EPA Breaker C71-S003D closed by rotating breaker lever to the ON (fully counter-clockwise) position	____	**CUE:** EPA Breaker C71-S003D EPA OUTPUT red light ON EPA INPUT - Red light ON
_____8.	5.3.1.6 Verify targets are reset on all EPA breakers	Verified targets on EPA breakers C71-S003B and D are reset	____	**CUE:** All targets on EPA Breakers are reset.

Terminating Cue: RPS MG Set B running with power available to transfer RPS B Bus to the Normal Supply.

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: The plant is at 100% power. Electrical maintenance has completed work on the RPS B MG set generator output breaker. RPS B Bus is being supplied from the Alternate Power Supply.

Initiating Cues: The CRS has directed you to restore the B RPS MG set and close the appropriate breakers to make RPS Bus B ready to transfer to the Normal Supply, in accordance with SOP-0079, Reactor Protection System.

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

MANUALLY STARTUP RHR "B" IN SUPPRESSION POOL COOLING FROM THE REMOTE SHUTDOWN PANEL

REASON FOR REVISION:

D 2010 NRC Exam JPM **P3**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-9-2010
Technical Review (SME)	KCN	Date
Alfonso Croeze	0597	9-9-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Manually Startup RHR "B" in Suppression Pool Cooling from the Remote Shutdown Panel

TASK REFERENCE:	400075004001

K/A REFERENCE & RATING:	219000	K1.01, 3.8/3.9 K3.01, 3.9/4.1 K6.06, 3.7/3.7 A1.01, 4.0/4.0 A1.02, 3.5/3.5 A1.08, 3.7/3.6 A4.01, 3.8/3.7 A4.02, 3.7/3.5 A4.07, 3.5/3.4
	295016	AK2.01, 4.4/4.5 AK2.02, 4.0/4.1 AA1.07, 4.2/4.3 AA2.04, 3.9/4.1 AA2.07, 3.2/3.4

TESTING METHOD:	Simulate Performance	X			Actual Performance	
	Control Room		Simulator		In-Plant	X

COMPLETION TIME:	12 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SAFETY FUNCTION:	5

SIMULATOR SETUP SHEET

Task Description:

Required Power:

IC No.:

Notes: NONE: This JPM is performed in the plant.

DATA SHEET

References for Development:	AOP-0031, Shutdown From Outside the Main Control Room
Required Materials:	AOP-0031, Shutdown From Outside the Main Control Room, Step 5.15
Required Plant Condition:	Any
Task Standard	Simulated placing RHR B in the suppression pool cooling mode from RSS-PNL102
Applicable Objectives:	RLP-OPS-AOP031, Obj. 4 and 6 RLP-OPS-0200, Obj. 3, 11 and 12
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

The Control Room has been evacuated. The Reactor is in Hot Shutdown and control has been established at the Remote Shutdown Panel. There has been no fire. Reactor pressure is under control with SRV's.

Initiating Cue:

The CRS has directed you to place RHR "B" in Suppression Pool Cooling using AOP-0031, Shutdown From Outside the Main Control Room, Step 5.15. Standby Service water pumps B and D are in service.

PERFORMANCE STEP *[SOP/ARP Step]*		STANDARD	S/U	COMMENTS
_____1.	5.15.1 Verify the RHR Heat Exchangers are being supplied by either Normal or Standby Service Water		N/A	**CUE:** RHR Heat Exchangers are being supplied by Standby Service Water per cue sheet.
*_____2.	5.15.2 Throttle E12-F068B, RHR HX B SVCE WTR RTN open to establish required flow not to exceed 5800 gpm as indicated on SWP-FI64B, SSW RHR HX B FLOW.	E12-F068B, RHR HX A SVCE WTR RTN throttled open.	____	**CUE:** RHR "B" HX flow is 5500 gpm RED light ON GREEN light ON
*_____3.	5.15.3 Start E12-C002B, RHR PUMP B and perform the following:	E12-C002B, RHR PUMP B has been started.	____	**CUE:** RED light ON GREEN light OFF
*_____4.	5.15.3.1 Open E12-F024B, RHR PUMP B TEST RTN TO SUP PL.	Control switch for E12-F024B, RHR PUMP B TEST RTN TO SUP PL placed in the open position.	____	**CUE:** RED light ON GREEN light OFF
_____5.	5.15.3.2 At ENS-SWG01B, check pump running amps are less than or equal to 91 amps	At ENS-SWG01B, pump running amps verified less than or equal to 91 amps	____	**CUE:** RHR B running amps are 80 amps

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

PERFORMANCE STEP *[SOP/ARP Step]*		STANDARD	S/U	COMMENTS
_____6.	5.15.4 Perform the following: 1. On EHS-MCC2E open the following breakers: • Bkr 6A, E12-F073A HEAT EXCH A VENT SUPPR POOL VALVE • Bkr 6B, E12-F074A HEAT EXCH A VENT SUPPR POOL VALVE 2. Verify the following valves are closed: 1) In AUX Bldg 95' NW crescent area, E12-MOVF073A, RHR A HX DN STREAM VENT VALVE		N/A	CUE: Inform the candidate that this step will be completed by a building operator. Inform the candidate that step 5.15.4 is complete.
*_____7.	5.15.5 WHEN RHR flow exceeds 1100 gpm, THEN close E12-F064B, RHR PUMP B MIN FLOW TO SUP PL.	E12-F064B, RHR PUMP B MIN FLOW TO SUP PL verified closed.	_____	**CUE:** RHR flow is greater than 1100 gpm RED light OFF GREEN light ON
_____8.	Throttle E12-F048B, RHR HX B BYPASS VALVE closed to obtain the desired cooling.	Control switch for E12-F048B, RHR HX B BYPASS VALVE placed in the closed position.	_____	**CUE:** RED light OFF GREEN light ON
_____8.	Record data on Attachment 3, Suppression Pool Water Temperature/Level Data		_____	**CUE:** Another operator is recording Data

Terminating Cue: .RHR "B" is in Suppression Pool Cooling per AOP-0031, Shutdown From Outside the Main Control Room, Step 5.15

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: The Control Room has been evacuated. The Reactor is in Hot Shutdown and control has been established at the Remote Shutdown Panel. There has been no fire. Reactor pressure is under control with SRV's.

Initiating Cues: The CRS has directed you to place RHR "B" in Suppression Pool Cooling using AOP-0031, Shutdown From Outside the Main Control Room, Step 5.15. Standby Service water pumps B and D are in service.

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

SHIFT STATOR COOLING WATER PUMPS

REASON FOR REVISION:

D 2010 NRC Exam JPM **S1**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-8-2010
Technical Review (SME)	KCN	Date
Tim Venable	0130	9-8-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Shift stator cooling water pumps

TASK REFERENCE:	253010001001

K/A REFERENCE & RATING:	245000	A4.03	2.7 / 2.8

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator	**X**	In-Plant	

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	Yes

SAFETY FUNCTION	4

SIMULATOR SETUP SHEET

Task Description: Alternate Stator Cooling Water Pumps

Required Power: Any

IC No.: 177

Notes:

DATA SHEET

References for Development:	SOP-020
Required Materials:	SOP-020
Required Plant Condition:	None
Task Standard	Returned to the previously running pump, following pump rotation due to out of spec parameters.
Applicable Objectives:	RLP-STM-0123 Objective 3, 4 and 7
Safety Related Task:	NO
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

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Read to the Operator:

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Initial Conditions:

Stator Cooling Water Pump "A" is operating with normal system pressure and flow. The turbine building operator has verified that B Stator cooling water pump is ready to start.

Initiating Cue:

The CRS directs you to shift Stator Cooling Water pumps in accordance with SOP-020 section 5.2

PERFORMANCE STEP *[SOP/ARP Step]*		STANDARD	S/U	COMMENTS
*_____1.	5.2.1 Depress idle GMC-SCPM-B, STATOR CLG WTR PUMP B START Pushbutton.	START pushbutton for GMC-SCPM-B depressed	____	GMC-SCPM-B red light ON green light OFF
_____2.	5.2.2 Depress previously running GMC-SCPM-A, STATOR CLG WTR PUMP A STOP Pushbutton.	STOP pushbutton for GMC-SCPM-A depressed	____	GMC-SCPM-A red light OFF green light ON
*_____3.	5.2.3 At H13-P870, observe pressure on GMC-PIEPR-15, STATOR COOLING WATER PRESS. IF pressure does not stabilize at greater than 60 psig, THEN immediately return to original pump configuration.	STATOR COOLING WATER PRESS on GMC-PIEPR-15 determined to be less than 60 psig.	____	
*_____4.	5.2.1 **ALTERNATE PATH** Depress idle GMC-SCPM-A, STATOR CLG WTR PUMP A START Pushbutton.	START pushbutton for GMC-SCPM-A depressed	____	GMC-SCPM-A red light ON green light OFF

PERFORMANCE STEP *[SOP/ARP Step]*		STANDARD	S/U	COMMENTS
_____5.	5.2.2 Depress previously running GMC-SCPM-B, STATOR CLG WTR PUMP B STOP Pushbutton.	STOP pushbutton for GMC-SCPM-B depressed	____	GMC-SCPM-B red light OFF green light ON

Terminating Cue: Stator Cooling Water Pump "A" is operating with normal system pressure and flow.

*** Denotes <u>Critical Step</u>**
^ Denotes <u>Sequence Critical</u>
(<u>must</u> be performed after previous step marked ^)

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: Stator Cooling Water Pump "A" is operating with normal system pressure and flow. The turbine building operator has verified that B Stator cooling water pump is ready to start.

Initiating Cues: The CRS directs you to shift Stator Cooling Water pumps in accordance with SOP-020 section 5.2

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

MANUALLY START LPCS - SUPPRESSION POOL TO SUPPRESSION POOL

REASON FOR REVISION:

D 2010 NRC Exam JPM **S2**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-8-2010
Technical Review (SME)	KCN	Date
Tim Venable	0130	9-8-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Manually Start LPCS – Suppression Pool to Suppression Pool

TASK REFERENCE:	203007001001

K/A REFERENCE & RATING:	209001	A2.01	3.4/ 3.4
		A3.01	3.6/ 3.6
		A3.04	3.7/ 3.6
		A4.01	3.8/ 3.6
		A4.11	3.7/ 3.6

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator	**X**	In-Plant	

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	Yes

ALTERNATE PATH (FAULTED):	Yes

SAFETY FUNCTION	2

SIMULATOR SETUP SHEET

Task Description: Manually Start LPCS-Suppression Pool to Suppression Pool

Required Power: Any

IC No.: 245

Notes: LPCS pump will trip when flow increases to approximately 4000 GPM

Build a trigger event with ADFLPCS .> 420 to a Trigger (420 #/sec = 3000 gpm)

Attach that Trigger to LPCS001(LPCS Pump Trip), no time delay or ramp

DATA SHEET

References for Development:	SOP-0032, Low Pressure Core Spray (Sys#205)
Required Materials:	SOP-0032, Low Pressure Core Spray (Sys#205) section 4.2
Required Plant Condition:	None
Task Standard	Started LPCS pump, responded to a pump trip and placed the system into standby lineup.
Applicable Objectives:	RLP-STM-205 Obj #5 and 10
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

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Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

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Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

LPCS is in a normal Standby Lineup.

Initiating Cue:

The CRS has directed you to manually start the LPCS System @ 5000 gpm Suppression Pool to Suppression Pool, per SOP-0032 section 4.2, to place load on the diesel generator.

	PERFORMANCE STEP	STANDARD	S/U	COMMENTS
_____1.	4.2.1 Notify Radiation Protection of impending system operation.		____	**Cue:** RP Notified
*_____2.	4.2.2 Start E21-C001, LPCS PUMP and perform the following.	Pump breaker handle placed to the close position, Pump Running, red & white light only.	____	
_____3.	4.2.2.1 Check LPCS pump current is less than 157 amps as indicated on E21-C001, LPCS MOTOR AMPS.	Amps verified less than 157.	____	
*_____4.	4.2.2.2 Verify E21-F011, LPCS MIN FLOW VLV TO SUPPRESSION POOL is open	Verified that E21-F011indicates full open, red light on	____	
_____5.	4.2.2.3 Check Annunciator P601-19A-F07, DIV 1 ADS LOGIC LPCS/LPCI OPR PERMISSIVE alarms.	Verified Annunciator P601-19A-F07, DIV 1 ADS LOGIC LPCS/LPCI OPR PERMISSIVE alarms.	____	

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
	4.2.3 *_____6. Open E21-F012, LPCS TEST RETURN VLV TO SUPPRESSION POOL	Placed and held the control switch for, E21-F012, to OPEN, red light on, green light off	____	
	4.2.4 _____7. <u>WHEN</u> flow rises above 875 gpm, <u>THEN</u> verify E21-F011, LPCS MIN FLOW VLV TO SUPPRESSION POOL closes	Verified that E21-F011, stroked full closed, Green light only	____	
	<u>ALTERNATE PATH</u> _____8. Respond to the LPCS pump Trip by referring to ARP-601-21-C08 and SOP-0032, Section 6.	Implemented ARP-601-21-C08, SOP-0032 Section 6 and Notifies CRS	____	CUE: As CRS direct operator to secure lineup per SOP-0032 section 6.0. Allow time for candidate to review ARP for P601-21-C7 & C8
	6.1 _____9 Verify adequate core cooling is assured by two independent indications.	Verified normal reactor water level	____	
	6.4.1 *_____10 Close E21-F012, LPCS TEST RETURN VLV TO SUPPRESSION POOL	Placed the switch control for E21-F012 to CLOSE, red light off green light on	____	

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____11.	4.2.1 Verify Close E21-F005, LPCS INJECT ISOL VALVE.	Verified red light off green light on	_____	
_____12.	6.5 When flow losers below 875 gpm, then verify E21-F011, LPCS MIN FLOW VLV TO SUPPRESSION POOL opens	Verified E21-F011, LPCS MIN FLOW VLV TO SUPPRESSION POOL opens, red light off ,green light on.	_____	If Valve does not OPEN, Operator to take action per procedure
_____13.	6.6 If E21-C002, LPCS/RHR DIV I LINE FILL PUMP is not running, than start E21-C002	Verified E21-C002 running, red light only	_____	

Terminating Cue: LPCS is shutdown per SOP-0032

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: LPCS is in a normal Standby Lineup.

Initiating Cues: The CRS has directed you to manually start the LPCS System @ 5000 gpm Suppression Pool to Suppression Pool, per SOP-0032 section 4.2, to place load on the diesel generator.

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

START DRYWELL LOW VOLUME PURGE

REASON FOR REVISION:

D 2010 NRC Exam JPM **S3**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-8-2010
Technical Review (SME)	KCN	Date
Scott Shultz	0176	9-8-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Start Drywell Low Volume Purge per SOP-059

TASK REFERENCE:	222015001001

K/A REFERENCE & RATING:	261000	A4.03	3.0 / 3.0

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator	**X**	In-Plant	

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	Yes

SAFETY FUNCTION	9

SIMULATOR SETUP SHEET

Task Description: Start Drywell Low Volume Purge per SOP-0059

Required Power: Mode 4 or 5

IC No.: 179

Notes: Set up an event trigger as follows:
ZDI2(437) != 0
DI_HVR-FN13 d 20 f stop

DATA SHEET

References for Development:	SOP-0059
Required Materials:	SOP-0059
Required Plant Condition:	Mode 4 or 5
Task Standard	Low volume purge in service. Responded to the trip and placed high volume purge into service.
Applicable Objectives:	RLP-STM-0403 Objective 2 and 6
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions: The plant is shutdown in Mode 4. The initial drywell entry will be performed on this shift. RP has requested the drywell to be purged for 1 hour prior to entry.

Initiating Cue: The CRS directs you to purge the drywell per SOP-0059 section 5.8. Steps 5.8.1 and 5.8.2 have been completed.

	PERFORMANCE STEP	STANDARD	S/U	COMMENTS
	NOTE: Steps 5.8.1 and 5.8.2 have been completed.			
_____1.	5.8.3 Verify the following dampers are open: • HVR-AOD164, UP STREAM ISOL SUPPLY • HVR-AOD143, DN STREAM ISOL SUPPLY • HVR-AOD214, AUX/CONTMT BLDG EXH ISOL • HVR-AOD262, AUX/CONTMT BLDG EXH ISOL	Verified: HVR-AOD164 red light ON green light OFF HVR-AOD143 red light ON green light OFF HVR-AOD214 red light ON green light OFF HVR-AOD262 red light ON green light OFF	____	
*_____2.	5.8.4 Open the following valves: • HVR-AOV165, CONTMT SPLY OUTBD ISOL • HVR-AOV123, CONTMT SPLY INBD ISOL • HVR-AOV125 & 126, DW PURGE BACKUP ISOL • HVR-AOV147 & 148, DW PURGE ISOL • HVR-AOV128, CONTMT RTN INBD ISOL • HVR-AOV166, CONTMT RTN OUTBD ISOL • HVR-AOD225, CONTMT/DW PURGE EXH ISOL	HVR-AOV165 control switch placed to open HVR-AOV123 control switch placed to open HVR-AOV125 & 126 control switch placed to open HVR-AOV147 & 148 control switch placed to open HVR-AOV128 control switch placed to open HVR-AOV166 control switch placed to open HVR-AOD225 control switch placed to open	____	• HVR-AOV165 red light ON green light OFF • HVR-AOV123 red light ON green light OFF • HVR-AOV125 & 126 red lights ON green light OFF • HVR-AOV147 & 148 red lights ON green light OFF • HVR-AOV128 red light ON green light OFF • HVR-AOV166 red light ON green light OFF • HVR-AOD225 red light ON green light OFF

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____3.	5.8.5 Place HVR-FN14, CONTMT PURGE FLT EXH FAN to START and verify the following: • HVR-AOD238, CONTMT PURGE FLT SUCT opens. • HVR-AOD240, CONTMT FLT EXH FAN SUCT opens.	Control switch for HVR-FN14 placed in the START position.	____	HVR-FN14 red light ON green light OFF HVR-AOD238 red light ON green light OFF HVR-AOD240 red light ON green light OFF
*_____4.	5.8.6 Place HVR-FN13, LOW VOL CONTMT PURGE to START and verify HVR-AOD236, LOW VOL FAN DISCH opens.	Control switch for HVR-FN13 placed in the START position.	____	HVR-FN13 red light ON green light OFF HVR-AOD236 red light ON green light OFF
*_____5.	**ALTERNATE PATH** Recognize and report the trip of HVR-FN14.	Report has been made to the CRS	____	**CUE:** As the CRS, direct the candidate to secure the drywell low volume purge starting at step 5.8.9 and start drywell high volume purge per SOP-059 section 5.7 using GTS-FN1A.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
* 6.	5.8.9 Place HVR-FN14, CONTMT PURGE FLT EXH FAN to STOP and verify the following dampers close: • HVR-AOD238, CONTMT PURGE FLT SUCT • HVR-AOD240, CONTMT FLT EXH FAN SUCT	Control switch for HVR-FN14 placed in the STOP position.	____	HVR-FN14 red light OFF green light ON HVR-AOD238 red light OFF green light ON HVR-AOD240 red light OFF green light ON
____ 7.	5.8.10 Verify HVR-FN15, FLT6 DECAY HEAT REMOVAL starts and the following dampers open: • HVR-AOD239, DECAY HEAT REMOVAL INTK • HVR-AOD241, DECAY HEAT REMOVAL DISCH	Verified proper component alignment	N/A	NOTE Decay heat fan will not auto start due to the suction damper open for less than 60 seconds.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____8.	5.8.11 Close the following valves: • HVR-AOV165, CONTMT SPLY OUTBD ISOL • HVR-AOV123, CONTMT SPLY INBD ISOL • HVR-AOV125 & 126, DW PURGE BACKUP ISOL • HVR-AOV147 & 148, DW PURGE ISOL • HVR-AOV128, CONTMT RTN INBD ISOL • HVR-AOV166, CONTMT RTN OUTBD ISOL	HVR-AOV165 control switch placed to closed HVR-AOV123 control switch placed to closed HVR-AOV125 & 126 control switch placed to closed HVR-AOV147 & 148 control switch placed to closed HVR-AOV128 control switch placed to closed HVR-AOV166 control switch placed to closed	_____	• HVR-AOV165 red light OFF green light ON • HVR-AOV123 red light OFF green light ON • HVR-AOV125 & 126 red light OFF green light ON • HVR-AOV147 & 148 red light OFF green light ON • HVR-AOV128 red light OFF green light ON • HVR-AOV166red light OFF green light ON
*_____9.	5.8.12 Place administrative controls on the following control switches: • HVR-AOV125 & 126, DW PURGE BACKUP ISOL • HVR-AOV147 & 148, DW PURGE ISOL	This step is N/A in mode 4	N/A	

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____10.	5.8.13 Close the following valves and install administrative controls: • HVR-AOV125-V1, DRYWELL SPLY OUTBD ISOL • HVR-AOV126-V1, DRYWELL EXH AIR OUTBD ISOL • HVR-AOV147-V1, DRYWELL SPLY INBD ISOL • HVR-AOV148-V1, DRYWELL EXH AIR INBD ISOL	This step is N/A in mode 4	N/A	
_____11.	5.8.14 WHEN HVR-FN15, FLT6 DECAY HEAT REMOVAL has operated at least 30 minutes OR at the discretion of the OSM/CRS, THEN place Filter Train Decay Heat Removal in standby by performing the following: 1. Place HVR-FN15, FLT6 DECAY HEAT REMOVAL in STOP. 2. Verify HVR-AOD239, DECAY HEAT REMOVAL INTK closes. 3. Verify HVR-AOD241, DECAY HEAT REMOVAL DISCH closes. 4. Place HVR-FN15, FLT6 DECAY HEAT REMOVAL in AUTO.	Step is N/A.	N/A	NOTE Decay heat fan will not auto start due to the suction damper open for less than 60 seconds.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
*_____12.	5.8.15 Close HVR-AOD225, CONTMT/DW PURGE EXH ISOL.	HVR-AOD225 control switch has been placed to the closed position	_____	HVR-AOD225 green light ON red light OFF.
_____13	5.7.1 Release administrative controls and open the following valves: • HVR-AOV125-V1, DRYWELL SPLY OUTBD ISOL • HVR-AOV126-V1, DRYWELL EXH AIR OUTBD ISOL • HVR-AOV147-V1, DRYWELL SPLY INBD ISOL • HVR-AOV148-V1, DRYWELL EXH AIR INBD ISOL	This step is N/A in mode 4	N/A	
_____14	5.7.2 Release administrative controls on the following control switches: • HVR-AOV125 & 126, DW PURGE BACKUP ISOL • HVR-AOV147 & 148, DW PURGE ISOL	This step is N/A in mode 4.	N/A	
_____15	5.7.3 Verify the following dampers are open: • HVR-AOD164, UP STREAM ISOL SUPPLY • HVR-AOD143, DN STREAM ISOL SUPPLY	Verified proper component alignment	_____	HVR-AOD164 red light ON green light OFF HVR-AOD143 red light ON green light OFF

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
*_____16	5.7.4 Open the following dampers and valves: • HVR-AOV165, CONTMT SPLY OUTBD ISOL • HVR-AOV123, CONTMT SPLY INBD ISOL • HVR-AOV125 & 126, DW PURGE BACKUP ISOL • HVR-AOV147 & 148, DW PURGE ISOL • HVR-AOV128, CONTMT RTN INBD ISOL • HVR-AOV166, CONTMT RTN OUTBD ISOL • HVR-AOD245, CONTMT PURGE TO SGT • HVR-AOD162, CONTMT PURGE TO SGT	HVR-AOV165 control switch placed to open HVR-AOV123 control switch placed to open HVR-AOV125 & 126 control switch placed to open HVR-AOV147 & 148 control switch placed to open HVR-AOV128 control switch placed to open HVR-AOV166 control switch placed to open HVR-AOD245 control switch placed to open HVR-AOD162 control switch placed to open.	____	• HVR-AOV165 red light ON green light OFF • HVR-AOV123 red light ON green light OFF • HVR-AOV125 & 126 red light ON green light OFF • HVR-AOV147 & 148 red light ON green light OFF • HVR-AOV128 red light ON green light OFF • HVR-AOV166 red light ON green light OFF • HVR-AOD245 red light ON green light OFF • HVR-AOD162 red light ON green light OFF
*_____17	5.7.5 Start GTS-FN1A, SGT EXH FAN A by depressing the START Pushbutton and verify the following: 1. GTS-AOD1A, SGT FILTER A SUCT ISOL opens. 2. GTS-FN1A, SGT EXH FAN A) starts. 3. GTS-AOD3A, SGT EXH FAN A) DISCH opens.	Start pushbutton has been depressed and held until HVR-AOD1A has fully opened and the GTS fan has started.	____	GTS-AOD1A red light ON green light OFF GTS-FN1A red light ON green light OFF GTS-AOD3A red light ON green light OFF

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____18	5.7.6 IF an Annulus Mixing System Initiation is received, THEN take action in accordance with the associated annunciator Alarm Response Procedures.		N/A	NOTE: Annulus Mixing System should not initiate.
_____19	5.7.7 Place HVR-FN8, HIGH VOL CONTMT/DW PURGE to START and verify HVR-AOD244, HIGH VOL FAN DISCH opens.	HVR-FN8 control switch has been placed to the START position.	_____	HVR-FN8 red light ON green light OFF HVR-AOD244 red light ON green light OFF
_____20	5.7.8 At AB 141 ft el, EJS-SWG2A(B), 480 V STANDBY SWITCHGEAR, verify breaker EJS-ACB033(073), GTS-H1A(B) is closed.	Candidate has dispatched an operator to verify breaker is in the closed position.	_____	**CUE:** As the building operator accept the direction to verify the breaker position and report that the breaker is closed.
_____21	5.7.9 Verify proper filter operation by observing the following differential pressure and radiation indications: • GTS-FLT1A(B), SGT FILTER TRAIN local component differential pressure instruments • RMS-RE21A&B, CONTMT PURGE ISOL • RMS-RE103, SGT FILTER EXH RAD MONITOR	Candidate has dispatched an operator to verify proper local component differential pressure instruments. Candidate has verified that radiation indications are normal on RE-21A&B and 103.	_____	**CUE:** As the building operator accept the direction to verify proper local component differential pressure instruments. Radiation monitors have a color status of GREEN.

Terminating Cue: Drywell High Volume Purge is in service with GTS-FN1A and HVR-FN8

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: The plant is shutdown in Mode 4. The initial drywell entry will be performed on this shift. RP has requested the drywell to be purged for 1 hour prior to entry.

Initiating Cues: The CRS directs you to purge the drywell per SOP-059 section 5.8. Steps 5.8.1 and 5.8.2 have been completed.

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

ALTERNATE CONTROL ROD DRIVE PUMPS

REASON FOR REVISION:

D 2010 NRC Exam JPM **S4**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-8-2010
Technical Review (SME)	KCN	Date
Scott Dallas	1385	9-8-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Alternate Control Rod Drive pumps

TASK REFERENCE:	201007001001

K/A REFERENCE & RATING:	201001	A1.01	3.1/2.9	A1.02	2.9/2.9
	201001	A1.03	2.9/2.8	A3.02	2.8/2.8
	201001	A3.03	2.7/2.7	A3.04	2.8/2.7
	201001	A4.01	3.1/ 3.1	A4.04	3.1/ 3.0

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator	**X**	In-Plant	

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	Yes

SAFETY FUNCTION	1

SIMULATOR SETUP SHEET

Task Description: Alternate Control Rod Drive Pumps

Required Power: Any

IC No.: 179

Notes:

DATA SHEET

References for Development:	SOP-0002, Section 5.1
Required Materials:	SOP-0002, Section 5.1
Required Plant Condition:	None
Task Standard	Alternate CRD pumps and respond to the tripped pump
Applicable Objectives:	RLP-STM-052 Obj #4 and 6
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions:

CRD Pump "B" is operating with normal system pressure and flow. “A” CRD pump is off.

Initiating Cue:

The CRS directs you to shift CRD pumps in accordance with SOP-0002, Section 5.1.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____1.	5.1.1.1 Check that the oil level for CRD Pump A and its associated gear box is normal.	Directed the building operator check CRD pump oil levels	____	**Cue:** The building operator reports that the CRD pump oil levels are normal
_____2.	5.1.1.2 Close C11-VF014A, CRD PMP A DISCH STOP CHECK VLV.	Directed the building operator to close C11-VF014A, CRD PMP A DISCH STOP CHECK VLV.	____	**Cue:** The building operator reports that C11-VF014A, CRD PMP A DISCH STOP CHECK VLV is now closed
_____3.	5.1.1.3 Vent the CRD Pump A casing using C11-VF109A, CRD PUMP A CASING VENT VLV.	Directed the building operator to vent the CRD Pump A casing using C11-VF109A, CRD PUMP A CASING VENT VLV.	____	**Cue:** The building operator reports that the CRD pump casing has been vented
*_____4.	5.1.1.4 Start C11-C001AP, CRD AUX OIL PUMP A.	Control switch for C11-C001AP, CRD AUX OIL PUMP A rotated to the start position	____	Red light on green light off
_____5.	5.1.1.5 Verify white light comes on for C11-C001A, CRD PUMP A.	Verified that the white light is illuminated.	____	White light on.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
*_____6.	5.1.1.6 Start C11-C001A, CRD PUMP A AND immediately perform the following:	Control switch for C11-C001A, CRD PUMP A rotated to the start position	_____	Red light on green light off
_____7.	5.1.1.6. Slowly, open C11-VF014A, CRD PMP A DISCH STOP CHECK VLV.	Directed the building operator to slowly, open C11-VF014A, CRD PMP A DISCH STOP CHECK VLV.	_____	**Cue:** The building operator reports that the discharge valve has been slowly opened fully
_____8.	5.1.1.7 Verify CRD Pump A is operating properly.	Directed the building operator to verify proper operation.	_____	CUE: The building operator reports that all pumps checks are satisfactory.
_____9.	5.1.2. Check that CRD System flow has stabilized.	Verified proper flow on C11-R606, CRD HYDR FLOW.	_____	45gpm
_____10.	5.1.3.1 Close C11-VF014B, CRD PMP B DISCH STOP CHECK VLV.	Directed the building operator to close C11-VF014B, CRD PMP B DISCH STOP CHECK VLV.	_____	CUE: Report as the building operator that C11-VF014B, CRD PMP B DISCH STOP CHECK VLV is closed.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____11.	5.1.3.2. Stop C11-C001B, CRD PUMP B.	Placed the control switch for C11-C001B, CRD PUMP B to stop.	_____	Red light OFF and green light ON.
*_____12.	**ALTERNATE PATH** C11-C001B, CRD PUMP B trips	Recognized and reported to the CRS that the CRD pump has tripped	_____	White light off, amber and green lights on. CUE; as the CRS direct the candidate to restore CRD-P1B discharge path, then start CRD-P1B per the ARP-P601-22 –A01 guidance.
_____13	5.1.5 Slowly reopen C11-VF014B, CRD PMP B DISCH STOP CHECK VLV for the pump which was stopped	Directed the building operator to slowly open C11-VF014B, CRD PMP B DISCH STOP CHECK VLV	_____	CUE: Report as the building operator that C11-VF014B, CRD PMP B DISCH STOP CHECK VLV is fully open.
_____14	1.(ARP-H13-P601/22/A01) At H13-P601, start the standby CRD Pump as follows:		N/A	
*_____15	1.a Start Standby CRD Pump Aux Oil Pump C11-C001BP, CRD AUX OIL PUMP B.	Placed the control switch for C11-C001BP, CRD AUX OIL PUMP B to start	_____	Red light ON green light OFF
_____16	1.b Place Flow Controller C11-R600 to MANUAL	Placed Flow Controller C11-R600 to MANUAL	_____	

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____17	1.c Close C11-R600, CRD HYDRAULICS FLOW CONTROLLER C11-F001A/B.	Depressed the close push button to close C11-R600, CRD HYDRAULICS FLOW CONTROLLER C11-F001A/B.	____	
_____18	1.d Verify White Control Power Light on for CRD Pump to be started.	Verified the white Control Power Light on for CRD Pump B to be started.	____	
*_____19	1.e Start Standby Pump C11-C001B, CRD PUMP B.	Placed the control switch for C11-C001B, CRD PUMP B to start.	____	Red light ON green light OFF
_____20	1.f Verify amps return to normal of less than 45 amps.	Verified amps return to normal of less than 45 amps.	____	
_____21	1.g WHEN system flow drops below 45 gpm as indicated on C11-R606, CRD HYDR FLOW, THEN slowly throttle open Flow Controller C11-R600 to achieve 45 gpm.	After system flow has dropped below 45 gpm slowly throttled open Flow Controller C11-R600 with the open push button to achieve 45 gpm.	____	
*_____22	1.h WHEN Flow Controller C11-R600 setpoint is nulled out, THEN place to AUTO.	After flow controller C11-R600 setpoint is nulled out, placed into AUTO.	____	

Terminating Cue: CRD-P1B restored per ARP-P601-22.

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: CRD Pump "B" is operating with normal system pressure and . “A” CRD pump is off.

Initiating Cues: The CRS directs you to shift CRD pumps in accordance with SOP-0002, Section 5.1.

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

Restoration of Offsite Power

REASON FOR REVISION:

D 2010 NRC Exam JPM **S5**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-9-2010
Technical Review (SME)	KCN	Date
Alfonso Croeze	0597	9-9-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Restoration of Offsite Power

TASK REFERENCE:	400014004001

K/A REFERENCE & RATING:	262001	K1.03	3.4/3.8			
	262001	A1.02	3.1/3.5			
	262001	A1.03	2.9/3.1	A1.05	3.2/3.5	
	262001	A2.07	3.0/3.2	A4.05	3.3/3.3	

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator	**X**	In-Plant	

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	Yes

ALTERNATE PATH (FAULTED):	No

SAFETY FUNCTION	6

SIMULATOR SETUP SHEET

Task Description:

Required Power: Loss of Offsite Power

IC No.: 180

Notes:

DATA SHEET

References for Development:	AOP-0004, Loss of Offsite Power
Required Materials:	AOP-0004, Loss of Offsite Power, Section 5.16
Required Plant Condition:	Plant shutdown, offsite power available, all three diesel generators running carrying their respective buses.
Task Standard	Power has been restored to NPS and NNS busses.
Applicable Objectives:	RLP-HLO-523 Obj. 11 and 12
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions: The plant experienced a Loss of Offsite Power approximately 6 hours ago due to a grid fault. All required immediate and subsequent actions were carried out. All three diesel generators started and are carrying their respective buses. All other plant equipment operated as designed. There are no faults within the plant electrical distribution system and all protective relays have been reset and documented. The System Operator has reported that offsite power is available at the switchyard and he is ready for restoration to the plant.

Initiating Cue: The CRS directs you to restore offsite power to the plant (NPS and NNS Buses) in accordance with AOP-0004, Loss of Offsite Power, Section 5.16. Steps 5.16.1 thru 5.16.5 have already been completed.

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____1.	5.16.6 At H13-P870, depress the LOCKOUT Pushbutton for the following pumps:		N/A	
_____2.	5.16.6 CCS-P1A, TPCCW PUMP 1A	CCS-P1A LOCKOUT Pushbutton has been fully depressed	_____	CCS-P1A control power white light OFF
_____3	5.16.6 CCS-P1B, TPCCW PUMP 1B	CCS-P1B LOCKOUT Pushbutton has been fully depressed	_____	CCS-P1B control power white light OFF
_____4	5.16.6 CCS-P1C, TPCCW PUMP 1C	CCS-P1C LOCKOUT Pushbutton has been fully depressed	_____	CCS-P1C control power white light OFF
_____5	5.16.6 CCP-P1A, RPCCW PUMP 1A	CCP-P1A LOCKOUT Pushbutton has been fully depressed	_____	CCP-P1A control power white light OFF
_____6	5.16.6 CCP-P1B, RPCCW PUMP 1B	CCP-P1B LOCKOUT Pushbutton has been fully depressed	_____	CCP-P1B control power white light OFF
_____7	5.16.6 CCP-P1C, RPCCW PUMP 1C	CCP-P1C LOCKOUT Pushbutton has been fully depressed	_____	CCP-P1C control power white light OFF
_____8	5.16.6 GMC-SCPM-A, STATOR CLG WTR PUMP A	GMC-SCPM-A LOCKOUT Pushbutton has been fully depressed	_____	GMC-SCPM-A control power white light OFF
_____9	5.16.6 GMC-SCPM-B, STATOR CLG WTR PUMP B	GMC-SCPM-B LOCKOUT Pushbutton has been fully depressed	_____	GMC-SCPM-B control power white light OFF
_____10	5.16.6 TMB-HFPM-A, EHC PUMP A	TMB-HFPM-A LOCKOUT Pushbutton has been fully depressed	_____	TMB-HFPM-A control power white light OFF
_____11	5.16.6 TMB-HFPM-B, EHC PUMP B	TMB-HFPM-B LOCKOUT Pushbutton has been fully depressed	_____	TMB-HFPM-B control power white light OFF
_____12	5.16.7 At H13-P808, Harris Panel, verify lockout indication for the following pumps:		N/A	

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____13	5.16.7 SWC-P1A LOCKOUT	SWC-P1A has been selected and locked out.	____	SWC-P1A BLUE light ON and Lockout status light ON.
_____14	5.16.7 SWC-P1B LOCKOUT	SWC-P1B has been selected and locked out.	____	SWC-P1B BLUE light ON and Lockout status light ON.
_____15	5.16. SWC-P1C LOCKOUT	SWC-P1C has been selected and locked out.	____	SWC-P1C BLUE light ON and Lockout status light ON.
_____16	5.16.7 SWP-P7A LOCKOUT	SWP-P7A has been selected and locked out.	____	SWP-P7A BLUE light ON and Lockout status light ON.
_____17	5.16.7 SWP-P7B LOCKOUT	SWP-P7B has been selected and locked out.	____	SWP-P7B BLUE light ON and Lockout status light on.
_____18	5.16.7 SWP-P7C LOCKOUT	SWP-P7C has been selected and locked out.	____	SWP-P7C BLUE light ON and Lockout status light ON.
_____19	5.16.8 At H13-P680, close the Preferred Station Service Transformer supply breakers as follows:		N/A	
_____20	5.16.8.1 Place PFD XFMR C & E SPLY SYNC SELECTOR SWITCH to N. BUS position.	Placed PFD XFMR C & E SPLY SYNC SELECTOR SWITCH to N. BUS position.	____	
*_____21	5.16.8.2 Close YWC-20620 to energize PFD STA SVCE XFMR C & E.	YWC-20620 CLOSE pushbutton has been depressed	____	YWC-20620 red light ON and green light OFF

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____22	5.16.8.3 Place PFD XFMR C & E SPLY SYNC SELECTOR SWITCH to S. BUS position.	Placed PFD XFMR C & E SPLY SYNC SELECTOR SWITCH to S. BUS position.	____	
*_____23	5.16.8.4 Close YWC-20610.	YWC-20610 CLOSE pushbutton has been depressed	____	YWC-20610 red light ON and green light OFF
_____24	5.16.8.5 Place PFD XFMR C & E SPLY SYNC SELECTOR SWITCH to OFF.	Placed PFD XFMR C & E SPLY SYNC SELECTOR SWITCH to OFF	____	
_____25	5.16.8.6 Place PFD XFMR D & F SPLY SYNC SELECTOR SWITCH to N. BUS position.	Placed PFD XFMR D & F SPLY SYNC SELECTOR SWITCH to N. BUS position	____	
*_____26	5.16.8.7 Close YWC-20670 to energize PFD STA SVCE XFMR D & F.	YWC-20670 CLOSE pushbutton has been depressed	____	YWC-20670 red light ON and green light OFF
_____27	5.16.8.8 Place PFD XFMR D & F SPLY SYNC SELECTOR SWITCH to ENJAY position.	Placed PFD XFMR D & F SPLY SYNC SELECTOR SWITCH to ENJAY position.	____	
*_____28	5.16.8.9 Close YWC-20665.	YWC-20665 CLOSE pushbutton has been depressed	____	YWC-20665 red light ON and green light OFF
_____29	5.16.8.10 Place PFD XFMR D & F SPLY SYNC SELECTOR SWITCH to OFF.	Placed PFD XFMR D & F SPLY SYNC SELECTOR SWITCH to OFF	____	

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____30	5.16.9 At H13-P808, close the Preferred Station Transformer output breakers as follows:		N/A	
*_____31	5.16.9.1 Select 13.8 KV on BUS A SYNC CHECK DEFEAT Switch.	Selected 13.8 KV on BUS A SYNC CHECK DEFEAT Switch.	_____	
*_____32	5.16.9.2 Close NPS-ACB11, 13.8 KV PFD SUPPLY BRKR for NPS-SWG1	NPS-ACB11 CLOSE pushbutton has been depressed	_____	NPS-ACB11 red light ON and green light OFF
_____33	5.16.9.3 Select OFF on BUS A SYNC CHECK DEFEAT Switch.	Selected OFF on BUS A SYNC CHECK DEFEAT Switch.	_____	
*_____34	5.16.9.4 Select 4.16 KV on BUS A SYNC CHECK DEFEAT Switch.	Selected 4.16 KV on BUS A SYNC CHECK DEFEAT Switch.	_____	
*_____35	5.16.9.5 Close NNS-ACB07, 4160V PFD SUPPLY BRKR for NNS-SWG1A.	NNS-ACB07 CLOSE pushbutton has been depressed	_____	NNS-ACB07 red light ON and green light OFF
_____36	5.16.9.6 Select OFF on BUS A SYNC CHECK DEFEAT Switch.	Selected OFF on BUS A SYNC CHECK DEFEAT Switch.	_____	
*_____37	5.16.9.7 Select 13.8 KV on BUS B SYNC CHECK DEFEAT Switch.	Selected 13.8 KV on BUS B SYNC CHECK DEFEAT Switch.	_____	
*_____38	5.16.9.8 Close NPS-ACB27, 13.8 KV PFD SUPPLY BRKR for NPS-SWG1B.	NPS-ACB27 CLOSE pushbutton has been depressed	_____	NPS-ACB27 red light ON and green light OFF

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____39	5.16.9.9 Select OFF on BUS B SYNC CHECK DEFEAT Switch.	Selected OFF on BUS B SYNC CHECK DEFEAT Switch.	____	
*_____40	5.16.9.10 Select 4.16 KV on BUS B SYNC CHECK DEFEAT Switch.	Selected 4.16 KV on BUS B SYNC CHECK DEFEAT Switch.	____	
*_____41	5.16.9.11 Close NNS-ACB15, 4160V PFD SUPPLY BRKR for NNS-SWG1B.	NNS-ACB15 CLOSE pushbutton has been depressed	____	NNS-ACB15 red light ON and green light OFF
_____42	5.16.9.12 Select OFF on BUS B SYNC CHECK DEFEAT Switch.	Selected OFF on BUS B SYNC CHECK DEFEAT Switch.	____	

Terminating Cue: Off site power has been restored to the NPS (13.8KV) and NNS (4.16KV) buses.

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: The plant experienced a Loss of Offsite Power approximately 6 hours ago due to a grid fault. All required immediate and subsequent actions were carried out. All three diesel generators started and are carrying their respective buses. All other plant equipment operated as designed. There are no faults within the plant electrical distribution system and all protective relays have been reset and documented. The System Operator has reported that offsite power is available at the switchyard and he is ready for restoration to the plant.

Initiating Cues: The CRS directs you to restore offsite power to the plant (NPS and NNS Buses) in accordance with AOP-0004, Loss of Offsite Power, Section 5.16. Steps 5.16.1 thru 5.16.5 have already been completed.

JOB PERFORMANCE MEASURE

TRAINING PROGRAM:

JOB PERFORMANCE MEASURE

LESSON PLAN:

Perform Rod Withdrawal Limiter Surveillance (>HPSP)

REASON FOR REVISION:

D 2010 NRC Exam JPM **S6**

PREPARE / REVIEW:

John Hedgepeth	0069	8-24-2010
Preparer	KCN	Date
Angie Orgeron	1538	9-8-2010
Technical Review (SME)	KCN	Date
Scott Shultz	0176	9-8-2010
Operations Validation	KCN	Date

* Indexing Information

TASK DESCRIPTION:	Perform Rod Withdrawal Limiter Surveillance (>HPSP)

TASK REFERENCE:	214001002001

K/A REFERENCE & RATING:	201005 A3.03

TESTING METHOD:	Simulate Performance				Actual Performance	**X**
	Control Room		Simulator	**X**	In-Plant	

COMPLETION TIME:	10 min.

MAX TIME:	N/A

JOB LEVEL:	RO/SRO

TIME CRITICAL:	No

EIP CLASSIFICATION REQUIRED:	No

PSA RISK DOMINATE:	No

ALTERNATE PATH (FAULTED):	No

SAFETY FUNCTION	7

SIMULATOR SETUP SHEET

Task Description: Perform Rod Withdrawal Limiter Surveillance (>HPSP)

Required Power: Greater than the HPSP

IC No.: 177

Notes:

DATA SHEET

References for Development:	STP-500-0704
Required Materials:	STP-500-0704
Required Plant Condition:	Greater than the HPSP
Task Standard	STP-500-0704 has been completed with reactor power above the high power setpoint.
Applicable Objectives:	RLP-STM-0500 Objective 4, 12 and 20
Safety Related Task:	(If K/A less than 3.0)
Control Manipulations:	N/A

Items marked with an "*" are required to be performed, and are **Critical Steps**, failure to successfully complete a **Critical Step** requires the JPM to be evaluated as "Unsatisfactory". Comments describing the reason for failure are required in the comments section of the Verification of Completion sheet.

Items marked with an "^" are required to be performed in the sequence described, if not performed in the sequence described, appropriate cues other than described in the body of the JPM may be required to provide proper feedback.

If In-Plant or In the Control Room:

Caution the Operator NOT to MANIPULATE the controls, but make clear what they would do if this were not a simulated situation.

Read to the Operator:

I will explain the initial conditions, and provide initiating cues. I may provide cues during the performance of this JPM, and I may ask follow-up questions as part of this JPM. When you have completed the task successfully, the objective for this JPM will be satisfied, and you should inform me when you have completed this task.

Initial Conditions: Reactor power is above the HPSP.

Initiating Cue: The CRS has directed you to perform STP-500-0704 for control rod 16-17 per section 7.1

Initial Position	10
Final Position	14

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____1.	7.1.1. Verify the selected rod is in the start position recorded in Step 6.6. Record rod position.	Rod 16-17 verified to be in position 10	____	Rod 16-17 selected and position 10 displayed
_____2.	7.1.2. On the ROD SELECT module, perform the following:		N/A	
_____3.	7.1.2.1 Deselect the rod.	Depressed the DESELECT pushbutton and then released.	____	DESELECT pushbutton illuminated, then off.
*_____4.	7.1.2.2 Select the rod that corresponds to the rod coordinate position recorded in Step 6.6.	Rod 16-17 has been selected.	____	Rod 16-17 selected and position 10 displayed
*_____5.	7.1.3. Withdraw the rod two notches in the notch withdrawal mode.	Withdraw pushbutton depressed.	____	Rod motion from position 10 to position 14
_____6	7.1.4. Check Annunciator P680-07A-C01, CONTROL ROD WITHDRAWAL BLOCK alarms.	CONTROL ROD WITHDRAWAL BLOCK alarm silenced and acknowledged.	____	CONTROL ROD WITHDRAWAL BLOCK alarm received.

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
* 7	7.1.5. Check the rod withdrawal limiter stops rod motion at the second notch by attempting to withdraw the rod a third notch and verifying the rod does not move.	Withdraw pushbutton depressed and verified no rod motion.		No change to rod position
8	7.3.1. On the ROD SELECT module, perform the following:		N/A	
9	7.3.1.1 Deselect the rod.	Depressed the DESELECT pushbutton and then released.		DESELECT pushbutton illuminated, then off.
10	7.3.1.2 Select the rod that corresponds to the rod coordinate position recorded in Step 6.6.	Rod 16-17 has been selected.		Rod 16-17 selected and position 14 displayed
11	7.3.2. Check Annunciator P680-07A-C01, CONTROL ROD WITHDRAWAL BLOCK is clear.	CONTROL ROD WITHDRAWAL BLOCK alarm has been reset.		CONTROL ROD WITHDRAWAL BLOCK alarm cleared.
12	7.3.3. Verify the selected rod is in the final position recorded in Step 6.6. Record rod position	Verified that rod 16-17 is at position 14 and recorded.		Rod 16-17 is displayed at position 14

*** Denotes Critical Step**
^ Denotes Sequence Critical
(must be performed after previous step marked ^)

PERFORMANCE STEP		STANDARD	S/U	COMMENTS
_____13	7.3.4. IF the rod is withdrawn to position 48, THEN perform a coupling check.	Recorded as N/A	____	
_____14	7.3.5. Verify the rod recorded in Step 6.6 is in the final position recorded in Step 6.6.	Requested independent verification of rod position.	____	**CUE:** Inform the candidate that the independent verification has been completed.
_____15	7.3.6. Notify the NCO of test completion.	Notified the NCO of test completion	____	**CUE:** Accept the notification as the NCO
_____16	7.3.7. Notify the OSM/CRS of test completion.	Notified the OSM/CRS of test completion	____	**CUE:** Accept the notification as the CRS

Terminating Cue: Rod Withdrawal Limiter verified per STP-500-0704

*** Denotes <u>Critical Step</u>**
^ Denotes <u>Sequence Critical</u>
(<u>must</u> be performed after previous step marked ^)

VERIFICATION OF COMPLETION

Operator: _____ SSN: _____

Evaluator: _____ KCN: _____

Date: _____ License (Circle one): RO / SRO No. of Attempts: _____

Follow-up Questions:

Follow-up Question Response:

Time to complete JPM: _____ minutes

Comments / Feedback:

RESULT: **Satisfactory / Unsatisfactory**

Note: An "**Unsatisfactory**" requires comments and remedial training.

Evaluator's Signature: _____ Date: _____

JPM Task Conditions/Cues

(Operator Copy)

Initial Conditions: Reactor power is above the HPSP.

Initiating Cues: The CRS has directed you to perform STP-500-0704 for control rod 16-17 per section 7.1

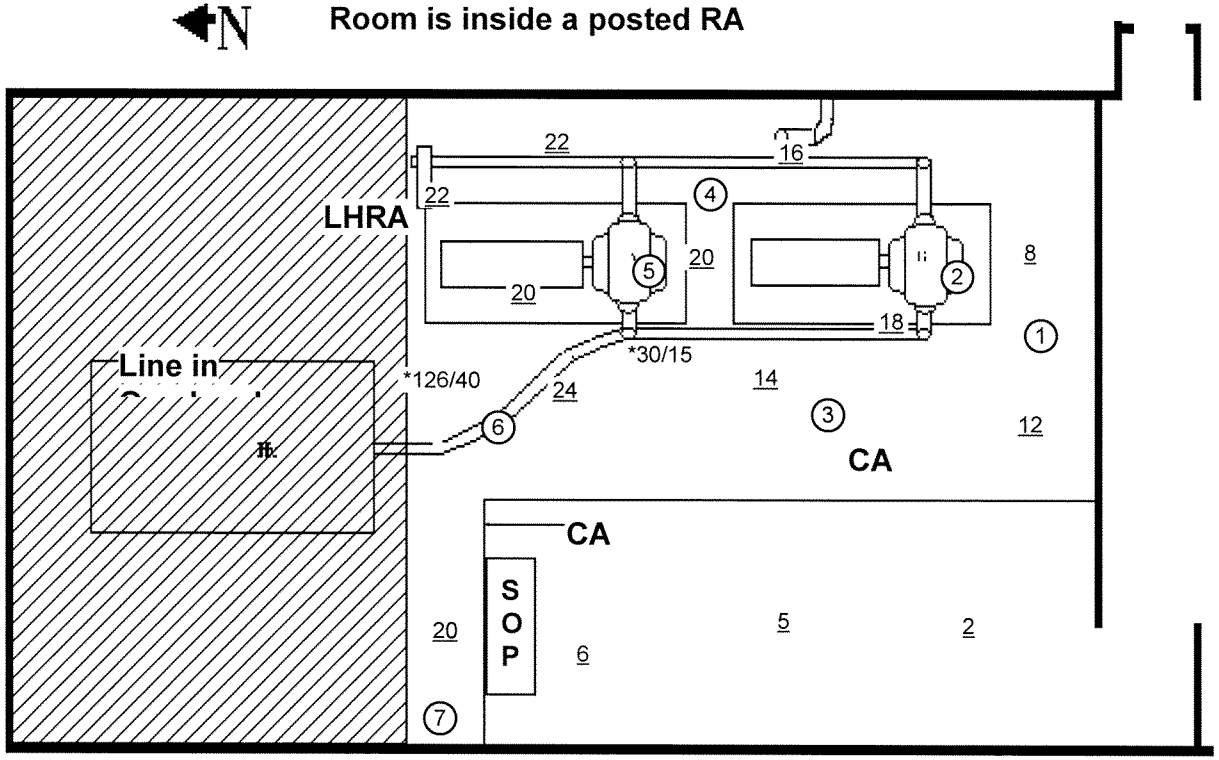
Initial Position	10
Final Position	14

RIVER BEND NUCLEAR STATION - Entergy Operations Inc.

20E1 'E' Tunnel SPC Area

N

Room is inside a posted RA



Smear Data (DPM/100cm2)

1 -	*****
2 -	*****
3 -	*****
4 -	**111**
5 -	*****
6 -	*****
7 -	*****

L.A.S. Data (ccpm/LAS)

Alpha Data (DPM/100cm2)

Survey Data

Unit:	**1**
Building:	
Elevation:	
Room:	
RxPwr:	**100**
Template:	**20E2 TN E-TUNNEL SPC**
Frequency:	**Monthly**
Survey Date:	
Survey Time:	
Status:	**In-Progress**
RWP:	**10-1001-01**
Surveyed By:	
Badge:	
Reviewed By:	
Notes:	

20E2 TN E-TUNNEL SPC AREA - H2=13scfm. Task Required Survey. Dose Recieved: .5 mR. All clean area smears taken on floors, walls, equipment etc... were <1000dpm/100cm2.

All Radiation values are in mrem/hr and <2 mrem/hr unless otherwise noted
Smear contamination values are in DPM/100 CM2 unless otherwise noted
☐ Smear/LAS < 100 CCPM H.S. - denotes Hot Spot
*12/13 denotes gamma contact / far (30cm)
*12/13 B denotes beta contact / far (30 cm)

12.5 denotes gamma genera area, T denotes RADS telemetry
*75 B denotes beta contact doserate
*12 denotes gamma contact doserate
(11) denotes smear locations
[12] denotes large area wipe locations.

Facility: River Bend Station Scenario No.: 1 Op-Test No.:

Examiners: _____ Operators: _____
_____ _____
_____ _____

Initial Conditions: 99% power. Preparing for down power for sequence exchange.
EOOS STATUS = 10 GREEN PROTECTED EQUIPMENT DIV I and RCIC
DIV III work week. High Pressure Core Spray is available but not operable until the breaker functional is complete.

Turnover: Complete breaker functional per SOP on the High Pressure Core Spray breaker. The pre-start checks have been completed satisfactory. Lower power per GOP-5 Power Maneuvering and the approved reactivity control plan.

Event No.	Malf. No.	Event Type*	Event Description
1		N (BOP,SRO)	Perform High Pressure Core Spray Pump Breaker Functional per SOP.
2		R(ATC)	Lower reactor power with control rods.
3	RCIC009 RCIC007	I (BOP,SRO)	Spurious RCIC Isolation. (Technical Specifications) E51-F063 RCIC Steam Supply Inboard Isolation Valve fails to auto close
4	B21005	I (SRO)	B21-PTN078A RPV pressure transmitter fails low. (Technical Specifications)
5	GMC002A GMC001B	C (BOP,SRO)	Stator Cooling Pump A trips, Stby pump fails to AUTO start requiring manual start.
6	GMC002B	C (ATC,SRO)	Second Stator Cooling Pump trips / Reactor Scram
7	RPS001A	M (ALL)	RPS Fails to Scram – All Signals
8	FWS004A	C (ATC,SRO)	Feedwater Master Controller output fails low
9	EHC002A	C (ATC,SRO)	Main Turbine Bypass Valves fail OPEN.

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Total Malfunctions: (5-8): (8) RCIC, E51-MOVF063, B21-PTN078A, Stator Cooling Pumps A & B, ATWS, FWS Controller, BPVs
Malfunctions after EOP entry: (1-2) (2) FWS, BPVs
Abnormal events: (2-4): (2) (AOP-3, AOP-1)
Major transients: (1-2): (1) ATWS
EOPs entered: (1-2): (2)EOP-1, EOP-2
EOP contingencies: (0-2) (1) EOP-1A
Critical tasks: (2-3) (2) Terminate FW injection, Begin control insertion.

Op-Test No.: _____ Scenario No.: 1 Event No.: 1 Page 1 of 10

Event Description:

Perform HPCS Pump Breaker Functional per SOP.

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct the BOP to start the HPCS pump per SOP-0030 section 5.4 with suction lined up to the CST
	BOP	Perform HPCS Breaker Functional • Start the HPCS Pump and verify the following: • HPCS Pump motor current is less than or equal to 350 amps on E22-R616, HPCS PUMP MOTOR AMPS. • WHEN HPCS Pump discharge pressure rises above 300 psig on E22-R601, HPCS PUMP DISCH PRESSURE, THEN E22-F012, HPCS MIN FLOW VALVE TO SUPPRESSION POOL opens. • Trip E22-ACB02, HPCS PUMP SUPPLY BRKR. • WHEN HPCS Pump discharge pressure lowers below 300 psig on E22-R601, • HPCS PUMP DISCH PRESSURE, THEN verify E22-F012, HPCS MIN FLOW VALVE TO SUPPRESSION POOL closes. • Log completion of the breaker functional in the MCR Logs. • Notify SRO that the breaker functional is complete
	ROLE PLAY	As the reactor building operator, if requested report that all pre-start checks are complete and SAT.
	ROLE PLAY	As the control building operator, if requested, report that the charging springs for High Pressure Core Spray pump motor breaker are charged.
	SRO	When the High Pressure Core Spray breaker functional test is complete, notify Work Management Center to exit the High Pressure Core Spray LCO.

Op-Test No.: _____ Scenario No.: 1 Event No.: 2 Page 2 of 10

Event Description:

Lower reactor power with control rods.

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct the power reduction per the reactivity Control Plan step 02 and 03
	ATC	Accept the direction for power reduction. Insert control rods per the RCP • At H13-P680, on the ROD SELECT MODULE, select the rod to be moved. • Depress SELECTED GROUP button to check positions of control rods within group are correct prior to movement • Check that a Rod Insert Block or Inhibit does not exist. • On H13-P680, depress and hold C11A-S314, INSERT Pushbutton until the IN indicator is lit or the start of rod motion is observed. • Check that the new rod notch position displayed is the next lowest even number.
	ATC	Repeat the rod movement steps as needed to complete step 02 and 03 of the RCP Report completion of the power reduction

Op-Test No.: _____ Scenario No.: 1 Event No.: 3 Page 3 of 10

Event Description:

Spurious RCIC Isolation. (Technical Specifications) RCIC MOV63 fails to auto close

Cue: RCIC Steam supply isolation annunciators on H13-P601. E51-F063 red light on, green light off.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report the RCIC isolation due to high differential steam flow
	SRO	• Accept the report • Refer to Tech. Specs. • Request back panel reading
	BOP	Refer to the Alarm Response Procedure Retrieve the requested back panel information
	ROLE PLAY	As the back panel operator when requested, report that trip unit E31-ESN683A and B reads 138 inches and the trip red LED is on.
	BOP	Report the back panel reading to the SRO Report that E51-F063 did not isolate per the ARP
	SRO	Direct the BOP to perform AOP-0003 for the isolation signal Direct the BOP to attempt to close E51-F063
	BOP	Closes E51-F063 manually. Verifies that all other required isolation valves have closed per AOP-0003
	SRO	Enters T.S. 3.5.3A and 3.3.6.1A Notifies WMC to investigate the trip unit failure Makes the required notifications per OSP-046

Op-Test No.: _____ Scenario No.: 1 Event No.: 4 Page 4 of 10

Event Description:

B21-PTN078A RPV pressure transmitter fails low. (Technical Specifications)

Cue: Annunciator H13-P680-06-A5.

Time	Position	Applicant's Actions or Behavior
	ATC	Recognize and report the failure of B21-PTN078A RPV pressure transmitter Give the SRO a critical parameter report Refer to ARP-P680-06-A5
	SRO	Accept the report Refer to Tech. Specs. Request back panel indication
	ROLE PLAY	As the back panel operator when requested, report that B21-PTN078A reads 1250 psig. All other channels read normal for this power level
	SRO	Enters T.S. 3.3.1.1A Contacts the WMC to investigate the transmitter failure

Op-Test No.: _____ Scenario No.: 1 Event No.: 5 Page 5 of 10

Event Description:

Stator Cooling Pump A trips, Standby pump fails to AUTO start requiring manual start.

Cue: Annunciator H13-P870-54-D01.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report the trip of Stator cooling water pump A. Recognize and report the failure of Stator cooling water pump B to auto start. Manually start Stator cooling water pump B. Refer to the Alarm Response procedure Direct the turbine building operator to perform running checks on pump B
	SRO	Accept the report from the BOP. Direct manual start of Stator cooling water pump B if not completed by the BOP. Contact WMC to investigate the pump trip.
	ROLE PLAY	As the turbine building operator, accept the direction to investigate the trip of Stator cooling water pump A and perform running checks on pump B

Op-Test No.: _____ Scenario No.: 1 Event No.: 6 Page 6 of 10

Event Description:

Second Stator Cooling Pump trips / Reactor Scram

Cue: Annunciator H13-P870-54-D01.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report the trip of Stator cooling water pump B
	ATC	Recognize and report that a turbine runback is in progress
	SRO	Accept report from the BOP / ATC Direct the ATC to place the reactor mode switch to Shutdown due to the turbine runback
	ATC	Place the mode switch to shutdown Determine that all control rods did not fully insert Arm and depress all four manual scram pushbuttons Determine that all control rods did not fully insert Arm and initiate Alternant Rod Insertion Determine that all control rods did not fully insert Give the SRO an ATWS report

Op-Test No.: _____ Scenario No.: 1 Event No.: 7 Page 7 of 10

Event Description:

RPS Fails to Scram – All Signals

Cue: Indication of control rods not fully inserted on H13-P680 Full Core Display.

Time	Position	Applicant's Actions or Behavior
	SRO	Enter EOP-1 and transition to EOP-1A RPV control ATWS Direct EOP-1A actions • ATC trip both reactor recirc pumps • BOP terminate and prevent injection with HPCS • BOP inhibit ADS • BOP install EOP-5 enclosures 16 and 24 • ATC terminate injection with feedwater and lower reactor water level to -60" to -140" • BOP initiate Standby liquid control system • BOP install EOP-5 enclosures 14 and 10 • BOP maximize CRD cooling water flow
	ATC	Trip both reactor recirc pumps • Depress STOP, RECIRC PUMP BREAKER 5A. • Depress STOP, RECIRC PUMP BREAKER 5B. • TRIP LFMG BRKR 1A • TRIP LFMG BRKR 1B.
	BOP	Terminate and prevent injection with High Pressure Core Spray • Override Injection / Initiate High Pressure Core Spray • Verify E22-F004 amber override light is lit. • Stop the High Pressure Core Spray pump. • Notify the SRO that injection from HPCS has been terminated and prevented.
	BOP	Inhibit ADS • Place Div I ADS key lock switch to INHIBIT • Place Div II ADS key lock switch to INHIBIT
	BOP	Install EOP-5 enclosures 16 and 24 • Request the back panel operator to perform needed actions • Verify that IAS-MOV106 is open

Op-Test No.: _____ Scenario No.: 1 Event No.: 7 Page 8 of 10

Event Description:

RPS Fails to Scram – All Signals continued

Time	Position	Applicant's Actions or Behavior
	ATC	Terminate injection with feedwater and lower reactor water level to -60" to -140" • Place the master RPV level controller into manual • Lower master controller output signal to "0"
	BOP	Initiate Standby liquid control system • Place SLC PUMP A(B) (NOT BOTH), control switch to RUN. • Verify the following: o SQUIB CONTINUITY A(B), light goes Off. o C41-F001A(B), SLC PUMP A(B) SUCT VLV, Opens. o C41-C001A(B), SLC PUMP A(B), Starts. • Notify SRO of SLC injection status. • Verify IAS-MOV106 is Open. • Record SLC Tank Level gallons.
	BOP	Install EOP-5 enclosures 14 and 10 • Request the back panel operator to perform needed actions
	BOP	Enclosure 10 actions • Determine if any rod motion has occurred • Direct the back panel operator to reinstall the fuses
	ATC	Enclosure 14 actions • Fully INSERT control rods by group, starting with Group 10, using IN TIMER SKIP pushbutton. Skip control rods which do not fully INSERT.
	BOP	Maximize CRD cooling water flow • Start C11-C001AP(BP), CRD AUX OIL PUMP A(B). • Verify C11-C001A(B), CRD PUMP A(B), white control power available light on. • Start C11-C001A(B), CRD PUMP A(B). • Place CRD HYDRAULICS FLOW CONTROLLER, in MANUAL and raise signal to 100%. • Fully Open C11-F003, CRD DRIVE WATER PRESS CONTROL VALVE. • Verify IAS-MOV106 is Open.

Op-Test No.: _____ Scenario No.: 1 Event No.: 8 Page 9 of 10

Event Description:

FWS Master Controller output fails low

Cue: Output demand signal remains at “0” when OPEN pushbutton is depressed on Feedwater Master Controller.

Time	Position	Applicant’s Actions or Behavior
	ATC	Recognize and report the failure of the master controller Place Feedwater level control valves A, B and C into manual Manually control reactor level within the given band of -60” to -140”
	SRO	Direct manual control of the feedwater level control valves

Op-Test No.: _____ Scenario No.: 1 Event No.: 9 Page 10 of 10

Event Description:

Main Turbine Bypass Valves fail OPEN.

Cue: Bypass Valve position indication FULL OPEN lights are illuminated when reactor pressure is below the established pressure setpoint.

Time	Position	Applicant's Actions or Behavior
	ATC	Recognize and report the turbine bypass valves have failed open and reactor pressure is lowering
	SRO	Direct the turbine building operator to secure the turbine bypass valve EHC pumps to close the bypass valves Direct the BOP to close the MSIV's if reactor pressure lowers to 600 psig

Facility: River Bend Station Scenario No.: 2 Op-Test No.:

Examiners: _____ Operators: _____
_____ _____
_____ _____

Initial Conditions: Mode 1 75% power. Down power in progress. Feedwater pump C is shutdown. EOOS STATUS 10 GREEN(9.8 GREEN when the FWS pump is tagged) PROTECTED EQUIPMENT DIV I work week DIV II protected.

Turnover: Perform STP-406-0201, DIVISION I FUEL BUILDING HVAC CHARCOAL FILTER A OPERABILITY TEST. Section 6.0 has been completed. Raise reactor power per GOP-005 Power Maneuvering. FWS P1C is off and due to be tagged and drained this shift.

Event No.	Malf. No.	Event Type*	Event Description
1		N (BOP,SRO)	Perform STP-406-0201 Division I Fuel Building HVAC Charcoal Filter A Operability Test
2		R (ATC)	Raise reactor power with reactor recirculation flow.
3	ED004K	C (SRO)	Loss of NJS-LDC1K 480 VAC Load Center (Technical Specification).
4	RMS013A	C (SRO)	RMS-RE13A Control Building Local Intake Monitor fails upscale.(Technical Specification)
5		C (BOP,SRO)	HVC-AOD51A Control Room Isolation damper fails to isolate, but can be manually isolated.
6	CNM004A	C (ATC,SRO)	Condensate pump A trip
7	WCS006	M (ALL)	RWCU leak in the Main Steam Tunnel
8	WCS004 WCS005	C(BOP,SRO)	G33-MOVF004 RWCU Pumps Outboard Isolation valve fails to automatically isolate. G33-MOVF001 RWCU Pumps Inboard Isolation valve fails to automatically isolate but can be manually isolated.
9	MGEN003	C(ATC,SRO)	Main Generator reverse power relay fails.

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Total Malfunctions: (5-8) (7) NJS-LDC1K, RMS-RE13A, HVC-AOD51A, CNM-P1A, RWCU leak, G33-MOVs, Main Turbine
Malfunctions after EOP entry: (1-2) (2) G33-MOVs, Main Turbine
Abnormal events: (2-4) (4) AOP-3, AOP-1, AOP-2, AOP-6
Major transients: (1-2) (1) Steam Tunnel leak
EOPs entered: (1-2) (2) EOP-1, EOP-3
EOP contingencies: (0-2) (0)
Critical tasks: (2-3) (2) Isolate leak, Trip the main turbine

Op-Test No.: _____ Scenario No.: 2 Event No.: 1 Page 1 of 9

Event Description:

Perform STP-406-0201 Division I Fuel Building HVAC Charcoal Filter A Operability Test

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct the BOP to perform STP-406-0201 DIVISION I FUEL BUILDING HVAC CHARCOAL FILTER A OPERABILITY TEST
	BOP	Perform STP-406-0201 DIVISION I FUEL BUILDING HVAC CHARCOAL FILTER A OPERABILITY TEST • At H13-P863/76B, record HVF-TI30A, CHARCOAL BED 2A INLET TEMP temperature. • Start HVF-FN3A, EXH FLTR TRAIN and record the time it was started. • Check HVF-AOD20A, FILTER 2A INLET opens. • Check HVF-AOD31A, FAN 3A DISCH opens. • Place the standby HVF-FN8A(B), FUEL BLDG EXH FAN A(B) Control Switch in STOP. • Stop the running HVF-FN8A(B), FUEL BLDG EXH FAN A(B). • Check HVF-AOD6A(B), FUEL BLDG EXH FAN A(B) DISCH closes. • Close HVF-AOD102, FUEL BLDG EXH FAN INLT. • Close HVF-AOD112, FUEL BLDG EXH FAN INLT. • Close HVF-AOD104, FUEL BLDG EXH ISOL. • Close HVF-AOD137, FUEL BLDG EXH ISOL. • Calculate required stop time. • Request Electrical Maintenance to take current readings on heater HVF-FLT2AH, FUEL BLDG FILTER TRAIN HEATER • Request Electrical Maintenance to take voltage readings on heater HVF-FLT2AH, FUEL BLDG FILTER TRAIN HEATER Report to the SRO that the filter train is in service per the STP.
	ROLE PLAY	As EM accept the direction to obtain amp and voltage readings per the STP. As reactor building operator accept direction to perform running checks on the filter train

Op-Test No.: _____ Scenario No.: 2 Event No.: 2 Page 2 of 9

Event Description:

Raise reactor power with reactor recirculation flow.

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct power ascension from 74% to 80% per GOP-005 by raising reactor recirc. flow.
	ATC	Accept direction for power ascension. • Raise reactor power with reactor recirculation flow. • Verify B33-K603A(B), RECIRC LOOP A(B) FLOW CONTROL M/A Station is in MAN. • Determine which B33-K603A(B), RECIRC LOOP A(B) FLOW CONTROL is to be adjusted by observing Loop Flows on B33-R612A and B33-R612B. Both loops may have to be adjusted to obtain the desired Reactor Power while maintaining Loop Flow mismatch within specification. • Note the current B33-HYVF060A(B), FLOW CONTROL VALVE position, generator load, MWt, APRMs and loop flows. • Raise Reactor Recirculation Flow by toggling momentarily B33-K603A(B) controller in the open direction using the slow detent while observing for a servo error deviation in the positive direction. • Verify the servo error returns to its previous position. • Observe B33-HYVF060A(B), FLOW CONTROL VALVE position, generator load, MWt, APRMs and loop flows for expected changes. • Repeat steps 5.9.1.2.2) through 5.9.1.2.7) until the desired Reactor Power Level is achieved. Report to the SRO when 80% power level is reached

Op-Test No.: _____ Scenario No.: 2 Event No.: 3 Page 3 of 9

Event Description:

Loss of NJS-LDC1K 480 VAC Load Center (Technical Specification).

Cue: Annunciator H13-P808-86-G07. NJS-ACB149 red light off, green light on.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report Loss of NJS-LDC1K 480 VAC Load Center
	SRO	Accept report of NJS-LDC1K 480 VAC Load Center failure.
	BOP	Direct ACR operator to investigate the loss of NJS-LDC 1K. 480 VAC Load Center
	ROLE PLAY	As the ACR operator when requested report that the supply breaker for NJS-LDC1K 480 VAC Load Center has an over current flag in and the 86 lock out device is tripped
	SRO	Contact the WMC to investigate the fault on NJS-LDC1K 480 VAC Load Center Enter TRM 3.7.9.1 A Make required notifications per OSP-0046

Op-Test No.: _____ Scenario No.: 2 Event No.: 4 Page 4 of 9

Event Description:

RMS-RE13A Control Building Local Intake Monitor fails upscale.(Technical Specification)

Cue: Annunciator H13-P863-74-H03 and Digital Radiation Monitoring computer alarm.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report the failure of RMS-RE13A Control Building Local Intake Monitor Refer to the Alarm response Procedure for the alarms received. Determine and report normal readings / status of RE13B Control Building Local Intake Monitor
	SRO	Accept the failure report Assign the performance of AOP-003 Automatic Isolations to the BOP Enter Tech Spec 3.3.7.1 A and D

Op-Test No.: _____ Scenario No.: 2 Event No.: 5 Page 5 of 9

Event Description:

HVC-AOD51A Control Room Isolation damper fails to isolate, but can be manually isolated.

Cue: HVC-AOD51A red light on, green light off with isolation signal present.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report the failure of HVC-AOD51A Control Room Isolation damper to close Close HVC-AOD51A Control Room Isolation damper per the AOP-003 or ARP actions. Verify all other isolations have occurred and report to the SRO.
	SRO	Enter Tech Spec 3.7.2 B (short term until AOD is closed) Contact WMC to investigate the failure of the radiation instrument and the failure to isolate.

Op-Test No.: _____ Scenario No.: 2 Event No.: 6 Page 6 of 9

Event Description:

CONDENSATE PUMP A TRIP

Cue: Annunciator H13-P680-02-A03

Time	Position	Applicant's Actions or Behavior
	ATC	Recognize and report that Condensate pump 'A' has tripped. Give the SRO a critical parameter report
	SRO	Accept the report Direct the ATC to perform AOP-006 Condensate and Feedwater failures Direct the ATC to verify pump shutdown per the SOP-007
	ATC	Close the 'A' condensate discharge valve.

Op-Test No.: _____ Scenario No.: 2 Event No.: 7 Page 7 of 9

Event Description:

RWCU leak in the Main Steam Tunnel

Cue: Annunciator H13-P680-19-A01,A03,B01,B03

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report high main steam tunnel temperature Obtain back panel reading for steam tunnel temperature
	ROLE PLAY	As the back panel operator when requested report MST temperature for the insight file – AAA top 40
	SRO	Enter EOP-003 Secondary Containment control when the main steam tunnel temperature reaches max normal temperature of 135 deg F. Direct the ATC to place the reactor mode switch to shutdown when the MST temperature reaches 200 deg F.
	ATC	Place the mode switch to shutdown Give the SRO a scram report
	SRO	Direct a reactor level band of -20" to 51" with condensate and feedwater Direct a pressure band of 500 to 1090 psig with bypass valves and steam line drains until the MSIVs close. Then direct pressure control with SRVs and RCIC Direct performance of AOP-0001 Reactor Scram and AOP-0002 Turbine Generator trip to the ATC Direct the performance of AOP-0003 Automatic Isolations to the BOP
	BOP	Perform actions of AOP-0003 to verify all required isolations have occurred.

Op-Test No.: _____ Scenario No.: 2 Event No.: 8 Page 8 of 9

Event Description:

G33-MOVF004 RWCU Pumps Outboard Isolation valve fails to automatically isolate.
G33-MOVF001 RWCU Pumps Inboard Isolation valve fails to automatically isolate but can be .
manually isolated.

Cue: Both valves indicate red light on, green light off with an isolation signal present.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report MSIV isolation
	BOP	Recognize and report the failure of G33-MOVF001 and F004 to isolate. Attempt to close G33-MOVF001 and F004 RWCU Pumps Isolation valves. Report that G33-MOVF001 did close and G33-MOVF004 did not.
	SRO	Direct BOP to obtain new reading for the MST temperature Direct the BOP to place RHR into suppression pool cooling mode of operation
	ROLE PLAY	As the back panel operator when requested report MST temperature for the insight file – AAA top 40
	BOP	Inform the SRO of the new MST temperature Place RHR into suppression pool cooling • Verify the selected system is not required for adequate core cooling. • Throttle E12-F068A(B), RHR HX A(B) SVCE WTR RTN, not to exceed 5800 gpm flow. • Start/Verify Running RHR PUMP A(B). • Verify E12-F042A(B), RHR PUMP A(B) LPCI INJECT ISOL VALVE, Closed. • Verify E12-F053A(B), RHR PUMP A(B) SDC INJECTION VALVE, Closed. • Open/Verify Open E12-F024A(B), RHR PUMP A(B) TEST RTN TO SUP PL. • Verify E12-F064A(B), RHR PUMP A(B) MIN FLOW TO SUP PL, Closed. • Close E12-F048A(B), RHR A(B) HX BYPASS VALVE, when auto open signal has cleared.

Op-Test No.: _____ Scenario No.: 2 Event No.: 9 Page 9 of 9

Event Description:

Main Generator reverse power relay fails.

Cue: YMC-20640 and YMC-20635 indicate red light on, green light off with Main Turbine TRIPPED indication lit.

Time	Position	Applicant's Actions or Behavior
	ATC	Recognize and report that the generator did not trip on reverse power Perform action of AOP-0002 Turbine Generator trips • IF an automatic trip setpoint has been exceeded, THEN verify Main Turbine has tripped. • Verify Main Generator Output Breakers YMC-20640, 230KV GEN BKR and YMC-20635, 230KV GEN BKR are open. • Verify Exciter Field Breaker is open.
	SRO	Direct actions of AOP-0002 if not already performed

Facility: River Bend Station Scenario No.: 3 Op-Test No.:

Examiners: _____ Operators: _____
_____ _____
_____ _____

Initial Conditions: Mode 1, 100%, RCIC tagged out for pump repairs. EOOS STATUS 8.6 YELLOW. DIV III protected. Non-Divisional work week

Turnover: Perform STP-256-0202 Standby Cooling Tower Fan Operability. Perform OSP-0101 section 4.11.3 for the turning gear oil pump pressure switch replacement. Lower power to 85% per GOP-005 to support control rod sequence exchange.

Event No.	Malf. No.	Event Type*	Event Description
1		N (SRO,ATC)	Perform OSP-0101 Turbine Generator Periodic Testing Section 4.11.3
2		N (SRO,BOP)	Perform STP-256-0202 Division II Standby Cooling Tower Fans Operability Test.
3		R(ATC)	Lower reactor power to 85% with reactor recirculation flow.
4		C (SRO,BOP)	HVR-UC1A Containment Unit Cooler trips. (Technical Specifications)
5	B21006B	I (SRO)	Level transmitter B21-LTN081A fails downscale (Technical Specifications).
6	CCP001B CCP004A	C (SRO,BOP)	CCP Component Cooling Water Pump B trips, CCP Component Cooling Water Pump A fails to Auto start
7	ED001 EDG001A EDG002B	M(ALL)	Station Blackout • Loss of offsite power • Div 1 DG trips • Div 2 DG fails to start
8	SWP004	C (SRO,BOP)	SWP-AOV599 Standby Cooling Tower Inlet Valve fails to auto open.
9	HPCS003	C (SRO,BOP)	High Pressure Core Spray fails to automatically initiate *(Pump only, DG starts on LOP to require SWP-AOV599 actions).*

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Total Malfunctions: (5-8) (6) HVR UC, LTN081A, CCP, SBO, SWP-AOV599, HPCS
Malfunctions after EOP entry: (1-2) (2) SWP-AOV599, HPCS
Abnormal events: (2-4) (2) AOP-1, AOP-50
Major transients: (1-2) (1) SBO
EOPs entered: (1-2) (2) EOP-1, EOP-2
EOP contingencies: (0-2) (1) Alternate Level Control
Critical tasks: (2-3) (2) Open SWP-AOV599, Maintain Adequate Core Cooling with HPCS

Op-Test No.: _____ Scenario No.: 3 Event No.: 1 Page 1 of 9

Event Description:

Perform OSP-0101 Turbine Generator Periodic Testing Section 4.11.3

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct the ATC to perform OSP-0101 Turbine Generator Periodic Testing section 4.11.3 as a post maintenance test for pressure switch replacement
	ATC	Perform OSP-0101 Turbine Generator Periodic Testing section 4.11.3 • Verify the 5 BRG LIFT PUMP switches are in OFF/RESET.(depress the OFF/RESET push button) • Depress the MSOP LOW PRESS TEST START pushbutton. • Check TML-TGOP TURNING GEAR OIL PMP starts and the white OUTPUT PRESS light comes on. • Depress TML-TGOP TURNING GEAR OIL PMP OFF/RESET pushbutton. • Check the white OUTPUT PRESS light goes off. • Depress the TML-TGOP TURNING GEAR OIL PMP AUTO pushbutton. • Place the 5 BRG LIFT PUMP switches in AUTO. Report the completion of OSP-0101 Turbine Generator Periodic Testing section 4.11.3

Op-Test No.: _____ Scenario No.: 3 Event No.: 2 Page 2 of 9

Event Description:

Perform STP-256-0202 Division II Standby Cooling Tower Fans Operability Test

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct the performance of STP-256-0202 Division II Standby Cooling Tower Fans Operability Test
	BOP	Perform STP-256-202 Division II Standby Cooling Tower Fans Operability Test • Check SWP-FN1B, SWP-FN1D, SWP-FN1F, SWP-FN1H, and SWP-FN1K Standby Cooling Tower #1 Fans green status lights are on. • Place SWP-FN1B, 1D, 1F, 1H, 1K STBY CLG TOWER #1 Fans bank hand switch to START and record time the last fan starts. • Check Standby Cooling Tower #1 Fans are operating by observing SWP-FN1B, SWP-FN1D, SWP-FN1F, SWP-FN1H, and SWP-FN1K red status lights are on. • WHEN the Standby Cooling Tower #1 Fans have operated for at least 15 minutes, THEN place SWP-FN1B, 1D, 1F, 1H, 1K STBY CLG TOWER #1 fans bank hand switch to STOP and record time. • Check Standby Cooling Tower #1 Fans are stopped by observing SWP-FN1B, SWP-FN1D, SWP-FN1F, SWP-FN1H, and SWP-FN1K green status lights are on. • Check SWP-FN1M, SWP-FN1P, SWP-FN1R, SWP-FN1T, and SWP-FN1V Standby Cooling Tower #1 Fans green status lights are on. • Place SWP-FN1M, 1P, 1R, 1T, 1V STBY CLG TOWER #1 Fans bank hand switch to START and record time the last fan starts. • Check Standby Cooling Tower #1 Fans are operating by observing SWP-FN1M, SWP-FN1P, SWP-FN1R, SWP-FN1T, and SWP-FN1V red status lights are on. • WHEN the Standby Cooling Tower #1 Fans have operated for at least 15 minutes, THEN place SWP-FN1M, 1P, 1R, 1T, 1V STBY CLG TOWER #1 Fans bank hand switch to STOP and record time Report the completion of STP-256-0202 Division II Standby Cooling Tower Fans Operability Test

Op-Test No.: _____ Scenario No.: 1 Event No.: 3 Page 3 of 9

Event Description:

Lower power to 85% to support control rod sequence exchange

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct ATC to lower power with recirc flow to 85%
	ATC	Accept the direction Lower Reactor Power by lowering recirculation flow: • Verify B33-K603A(B), RECIRC LOOP A(B) FLOW CONTROL M/A Station is in MAN. • Determine which B33-K603A(B), RECIRC LOOP A(B) FLOW CONTROL is to be adjusted by observing Loop Flows on B33-R612A and B33-R612B. Both loops may have to be adjusted to obtain the desired Reactor Power while maintaining Loop Flow mismatch within specification. • Note the current B33-HYVF060A(B), FLOW CONTROL VALVE position, generator load, MWt, APRMs and loop flows. • Lower Reactor Recirculation Flow by toggling momentarily B33-K603A(B) controller in the closed direction using the slow detent while observing a servo error deviation in the negative direction. • Verify the servo error returns to its previous position. • Observe B33-HYVF060A(B), FLOW CONTROL VALVE position, generator load, MWt, APRMs and loop flows for expected changes. • Repeat steps until the desired Reactor Power Level is achieved. Report the completion of power reduction

Op-Test No.: _____ Scenario No.: 3 Event No.: 4 Page 4 of 9

Event Description:

HVR-UC1A Containment Unit Cooler trips. (Technical Specifications)

Cue: Annunciator H13-P863-71A-H03. Amber light illuminated at HVR-UC1A breaker indication.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report the trip of HVR-UC1A Refer to alarm response procedure
	SRO	Accept the report Direct the start of HVR-UC1C per the SOP
	ROLE PLAY	When requested, as the reactor building operator report that there is an OC flag down for HVR-UC1A and the breaker indicates tripped.
	BOP	Accept the direction to start HVR-UC1C • Start the standby HVR-UC1A(B)(C), CONTMT UNIT CLR A(B)(C) and verify the applicable cooling water valve HVN-TV5A(B)(HVN-TV122) opens. Report to the SRO when HVR-UC1C is started.
	SRO	Enter Tech Spec 3.6.1.7 A
	ROLE PLAY	As EM / FIN accept the request to investigate HVR-UC1A Inform the SRO not to depress the STOP pushbutton until the investigation is complete.

Op-Test No.: _____ Scenario No.: 3 Event No.: 5 Page 5 of 9

Event Description:

Level transmitter B21-LTN081A fails downscale (Technical Specifications).

Cue: Annunciator H13-P680-06A-A05.

Time	Position	Applicant's Actions or Behavior
	ATC	Recognize and report that level transmitter B21-LTN081A failed downscale
	SRO	Accept the report Direct BOP to obtain back panel information
	ROLE PLAY	As the back panel operator report that B21-ESN681 and 682 indicate downscale and the trip light is on
	BOP	Report the back panel indication to the SRO
	SRO	Enter Tech Spec 3.3.6.1 A Contact WMC to investigate the instrument failure

Op-Test No.: _____ Scenario No.: 3 Event No.: 6 Page 6 of 9

Event Description:

CCP Pump B trips, CCP Pump A fails to Auto start

Cue: Annunciator H13-P870-55A-C04.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report the trip of CCP-P1B Start CCP-P1A per the ARP Refer to AOP-0011
	SRO	Accept the report for the tripped CCP pump Direct reference to AOP-0011
	ROLE PLAY	As the reactor building operator, report that nothing looks abnormal with B pump and post start checks are satisfactory for the A pump.

Op-Test No.: _____ Scenario No.: 3 Event No.: 7 Page 7 of 9

Event Description:
Station Blackout
Loss of offsite power
Div 1 DG trips
Div 2 DG fails to start

Cue: Loss of control room lighting, various annunciators, Offsite power supply breakers indicate green lights on, red lights off. Div 1 DG amber trip light, Div 2 DG indicates standby conditions.

Time	Position	Applicant's Actions or Behavior
	ALL	Recognize and report the loss of offsite.
	ATC	Place the reactor mode switch to Shutdown Give a scram report to the SRO
	BOP	Recognize and report the status of the emergency diesel generators • Div I started and tripped • Div II did not start Attempt to emergency start the Div II diesel generator
	SRO	Accept the scram report Enter EOP-001 RPV Control • Direct a level band of -20" to 51" with HPCS • Direct a pressure band of 500 to 1090 psig with SRV's • Direct implementation of AOP-0050

Op-Test No.: _____ Scenario No.: 3 Event No.: 8 Page 8 of 9

Event Description:

SWP-AOV599 Standby Cooling Tower Inlet Valve fails to auto open.

Cue: SWP-AOV599 green light on, red light off.

Time	Position	Applicant's Actions or Behavior
	BOP	Implement action of AOP-050 Station Blackout • Verify SWP-P2C, STANDBY SERVICE WATER PUMP running. • Verify SWP-MOV40C, PUMP DISCH VALVE open. • Verify SWP-AOV599, STBY CLG TWR INLET, STATION BLACKOUT RETURN TO STBY COOLING TOWER open. • Dispatch an operator to attempt an emergency start of the Diesel Generators per Attachment 1

Op-Test No.: _____ Scenario No.: 3 Event No.: 9 Page 9 of 9

Event Description:

High Pressure Core Spray fails to automatically initiate *(Pump only, DG starts on LOP to required SWP-AOV599 actions).*

Cue: HPCS Initiation white light is off with Level <-43 inches or manual initiation signal present.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report that the HPCS pump did not automatically start. Manually start the HPCS pump. • **Verify** Annunciator **P601-16A-G04**, HPCS INJECTION LINE PRESSURE LOW, is **not lit**. • Arm and depress **HPCS MANUAL INITIATION** Pushbutton. • Verify **HPCS PUMP running**. • Verify **E22-F004**, HPCS INJECT ISOL VALVE, **Opens**. • Verify HPCS **injection flow**. • Verify E22-F012, HPCS **MIN FLOW VALVE** TO SUPPRESSIONPOOL, **Closes**. • **WHEN DESIRED TO STOP INJECTION** o If possible reset initiation by depressing E22A-S7 o Close E22-F004**, HPCS INJECT ISOL VALVE** Report that HPCS is running and injecting.

Facility: River Bend Station Scenario No.: 4 Op-Test No.:

Examiners: _____ Operators: _____
_____ _____
_____ _____

Initial Conditions: Mode 1, 50% power. Plant startup in progress. GOP-0001 Step G.29. (2 FWS pumps in service.) EOOS = 10 GREEN. Non-divisional work week. Division III is Protected

Turnover: Remove RWCU F/D 'A' from service per SOP. Start HDL pumps A & C. Then raise power to 55% per reactivity control plan Step 90. Hold at 55% until chemistry is adequate to Pump Forward. Start RHR in Sup Pool Cooling lineup to support system flush.

Event No.	Malf. No.	Event Type*	Event Description
1		N (SRO,ATC)	Remove RWCU F/D 'A' from service
2		N (SRO,BOP)	Start Heater Drain Pumps A & C in Recirc mode.
3		R(ATC)	Raise power to 55% with control rods.
4		N (SRO,BOP)	Start RHR A Residual Heat Removal Pump in Suppression Pool Cooling mode per SOP-0031 to support system flush to reduce dose rates in pump room.
5	RHR002A	C (SRO,BOP)	RHR A Residual Heat Removal Pump trips. (Technical Specifications)
6	Overides	C (SRO)	Containment Monitoring System H2 analyzer failure (Technical Specifications)
7	CNM006 RPS001B	M (ALL)	Condensate filter high differential pressure. Total loss of feedwater. Reactor Scram. ARI inserts rods.
8	RCIC001	C (SRO,BOP)	Reactor Core Isolation Cooling pump turbine trips, but can be manually reset for level control.
9	MSS111P MSS112P	C (SRO,BOP)	MSS-MOV111/112 MSR Steam Supply Valve fails to isolate causing uncontrolled pressure drop.

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Total Malfunctions: (5-8) (6) RHR A, CMS, CNM dp, RPS, RCIC, MSS
Malfunctions after EOP entry: (1-2) (2) RCIC, MSS
Abnormal events: (2-4) (2) AOP-1, AOP-2
Major transients: (1-2) (1) Loss of FW, HPCS injection valve failure
EOPs entered: (1-2) (2) EOP-1, EOP-2
EOP contingencies: (0-2) (1) Alternate level control
Critical tasks: (2-3) (2) Adequate core cooling with RCIC, Close MSIVs or MSS to avoid exceeding cooldown rate.

Op-Test No.: _____ Scenario No.: 4 Event No.: 1 Page 1 of 10

Event Description:

Remove RWCU Filter Demin 'A' from service

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct the ATC to remove RWCU Filter Demin from service per the SOP section 5.4
	ATC	Accept the direction to remove the RWCU Filter Demin from service. Direct the reactor building operator to perform section 5.4 of SOP-090.
	ROLE PLAY	As the reactor building operator when directed, inform the ATC that you are ready to perform step 5.4.2 of SOP-090.
	ATC	Maintain a nearly constant system flow rate as indicated on G33-R609, RWCU INLET FLOW by simultaneously performing the following • Throttle G33-F044, RWCU F/D BYP open. • Throttle G36-FCR022A(B), F/D FLOW CONTROLLER G36-PNLP002 closed.(reactor building operator)
	ROLE PLAY	As the RB operator report that RWCU Filter Demin is out of service.

Op-Test No.: _____ Scenario No.: 4 Event No.: 2 Page 2 of 10

Event Description:

Start HDL Pumps A & C in Recirc mode.

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct the BOP operator to start HDL-P1A and C Heater Drain pumps in recirc mode per SOP-010
	BOP	Accept the direction to start Heater Drain Pumps Perform SOP actions to start HDL-P1A and C Heater Drain pumps in recirc mode per SOP-010
	BOP	Direct the turbine building operator to: • Close HDL-LV4A, 3RD PT A HTR DRAIN VLV per Attachment 6 • Close HDL-LV4B, 3RD PT HTR B DRAIN VLV per Attachment 6
	ROLE PLAY	When requested as the TB operator in form the BOP that steps 4.3.1.1 and 4.3.1.2 are complete
	BOP	Verify the following Htr Drain Pump Suction Valves are open: 1) HDL-MOV53A, HTR DR PMP 1A SUCT 3) HDL-MOV53C, HTR DR PMP 1C SUCT Verify the following Heater Drain Pump Discharge Valves are closed: 1) HDL-MOV55A, HTR DR PMP 1A DISCH 3) HDL-MOV55C, HTR DR PMP 1C DISCH Open the following Cooling Water Valves: 1) CCS-AOV57A, PUMP A CLR ISOL VLV 3) CCS-AOV57C, PUMP C CLR ISOL VLV Verify the following Seal Water Valves are open: 1) CNA-AOV5A, PUMP A SEAL WTR VALVE 3) CNA-AOV5C, PUMP C SEAL WTR VALVE Direct the turbine building operator to vent the Heater drain Pump Seal per step 4.3.6.
	ROLE PLAY	As the TB operator when requested report that step 4.3.6 is complete

Op-Test No.: _____ Scenario No.: 4 Event No.: 2 Page 3 of 10

Event Description:

Start HDL Pumps A & C in Recirc mode. (Cont.)

Time	Position	Applicant's Actions or Behavior
	BOP	• Place HDL-FV20A, HTR DR PUMP 1A RECIRC FLOW CONTROLLER in MANUAL. • Open HDL-FV20A to 25% open • Open HDL-MOV58A, HTR DR PMP A VENT valve. Direct the turbine building operator to perform step 4.3.9
	ROLE PLAY	As the TB operator when requested report that step 4.3.9 is complete
	BOP	• Start HDL-P1A, HTR DR PUMP 1A for Heater String A • Open HDL-MOV55A, HTR DR PMP 1A DISCH valve. • Throttle HDL-FV20A open to no more than 55% to prevent damage to piping and supports. • Close HDL-MOV58A, HTR DR PMP A VENT valve. • Place HDL-FV20B, HTR DR PUMP 1B RECIRC FLOW CONTROLLER in MANUAL. • Open HDL-FV20B to 25% open. Direct the turbine building operator to perform step 4.3.15
	ROLE PLAY	As the TB operator when requested report that step 4.3.15 is complete and the pump is not rotating
	BOP	• Open HDL-MOV58C, HTR DR PMP C VENT valve. Direct the turbine building operator to perform step 4.3.18
	ROLE PLAY	As the TB operator when requested report that step 4.3.18 is complete
	BOP	• Start HDL-P1C HTR DR PUMP 1C for Heater String B. • Open HDL-MOV55C, HTR DR PMP 1C DISCH valve. • Throttle HDL-FV20B open to no more than 55% to prevent damage to piping and supports. • Close HDL-MOV58C, HTR DR PMP C VENT valve Direct the turbine building operator to perform step4.3.23 Report to the SRO that HDL-P1A and C are in the recirc mode.
	ROLE PLAY	As the TB operator when requested report that step 4.3.23 is complete

Op-Test No.: _____ Scenario No.: 4 Event No.: 3 Page 4 of 10

Event Description:

Raise power to 55% with control rods.

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct the ATC to raise reactor power with control rods per the reactivity control plan
	ATC	Accept the direction to raise power With draw control rods 20-37, 36-37, 36-21 and 20-21 from position 06 to position 12. • Select the rod to be moved • Depress SELECTED GROUP button to check positions of control rods within group are correct prior to movement. • Check that a Rod Withdrawal Block or Inhibit does not exist. • Depress and hold C11A-S334, WITHDRAW Pushbutton until the IN indicator is lit or the start of rod motion is observed. • Check that the new rod notch position displayed is the next highest even number. Repeat for all 4 control rods. Report completion to the SRO.

Op-Test No.: _____ Scenario No.: 4 Event No.: 4 Page 5 of 10

Event Description:

Start RHR A in Suppression Pool Cooling mode per SOP-0031 to support system flush to reduce dose rates in pump room.

Cue: Turnover item.

Time	Position	Applicant's Actions or Behavior
	SRO	Direct the BOP to start RHR pump A in the suppression pool cooling mode per SOP-0031
	BOP	Accept the direction Start RHR-A in suppression pool cooling mode • Verify RMS-RE15A is operable OR Chemistry grab sampling is being obtained on the RHR A Heat Exchanger. • On H13-P870, throttle open E12-F068A, RHR HX A SVCE WTR RTN to establish less than or equal to 5800 gpm flow as indicated on E12-R602A, RHR HX A SVCE WTR FLOW. • Start the E12-C002A, RHR PUMP A. • Open E12-F024A, RHR PUMP A TEST RTN TO SUP PL. • WHEN flow exceeds 1100 gpm, THEN verify E12-F064A, RHR PUMP A MIN FLOW TO SUP PL closes • Check running pump amps are less than or equal to 91 amps. • Throttle closed E12-F048A, RHR A HX BYPASS VALVE to obtain the desired cooling. Report that RHR pump A is in the suppression pool cooling mode

Op-Test No.: _____ Scenario No.: 4 Event No.: 5 Page 6 of 10

Event Description:

Residual Heat Removal Pump A trips. (Technical Specifications)

Cue: Annunciator H13-P601-20A-E05

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report the Residual Heat Removal Pump A has tripped
	SRO	Accept the report Direct the completion of the shutdown section of SOP-0031 Enter Tech Spec 3.5.1 A (ECCS) and 3.6.2.3 A (SPC) Contact WMC to investigate the trip of RHR pump A
	BOP	• Close E12-F024A, RHR PUMP A TEST RTN TO SUP PL. • Verify open the following: o E12-F003A, RHR A HX OUTLET VALVE o E12-F048A, RHR A HX BYPASS VALVE o E12-F064A, RHR PUMP A MIN FLOW TO SUP PL • On H13-P870, close E12-F068A, RHR HX A SVCE WTR RTN. Report that Residual Heat Removal Pump A is shutdown

Op-Test No.: _____ Scenario No.: 4 Event No.: 6 Page 7 of 10

Event Description:

Containment Monitoring System H2 analyzer failure (Technical Specifications)

Cue: Annunciator H13-P808-83A-F04.

Time	Position	Applicant's Actions or Behavior
	BOP	Recognize and report the loss of power to Containment Monitoring System
	SRO	Accept the report Enter TRM 3.3.14 A Contact WMC to investigate CMS power loss.

Op-Test No.: _____ Scenario No.: 4 Event No.: 7 Page 8 of 10

Event Description:

Condensate filter high differential pressure. Total loss of feedwater. Reactor Scram. ARI inserts rods.

Cue: Rising pressure indicated on CND-PDI138 just prior to annunciator H13-P680-03A-B03, followed by amber trip indication on all 3 feedwater pumps.

Time	Position	Applicant's Actions or Behavior
	ATC	Recognize and report that condensate differential pressure is rising
	SRO	Accept the report Direct the ATC to place the reactor mode switch to shutdown
	ATC	Place the reactor mode switch to S/D Recognize that ARI initiation is required Give the SRO a scram report that includes ARI inserted the control rods
	SRO	Accept the report Enter EOP-001 RPV control • Direct a level band to the BOP of -20" to 51" with RCIC and HPCS • Direct a pressure band the ATC of 500 to 1090 psig with bypass valves and steam line drains. • Assign AOP-001, 002 and 006 actions to the ATC

Op-Test No.: _____ Scenario No.: 4 Event No.: 8 Page 9 of 10

Event Description:

Reactor Core Isolation Cooling turbine trips, but can be manually reset for level control.

Cue: RCIC Trip and Throttle valve position indication green light on, red light off with initiation signal present.

Time	Position	Applicant's Actions or Behavior
	ATC	Recognize and report a loss of all high pressure feed at the P680 panel
	SRO	Direct the BOP to initiate Reactor Core Isolation Cooling
	BOP	Accept the direction • Arm and depress, RCIC MANUAL INITIATION Pushbutton. • Verify the following: o E51-F045, RCIC STEAM SUPPLY TURBINE STOP VALVE Opens. o RCIC STEAM SUPPLY and EXHAUST DRAIN POT ISOLATION VALVES Close. o E51-C002C, GLAND SEAL COMPRESSOR Starts. o E51-F013, RCIC INJECT ISOL VALVE Opens. • Verify RCIC Turbine comes up to speed and stabilizes at 2300 – 4600 rpm. • Verify RCIC injection flow. • Verify E51-F019, RCIC MIN FLOW VLV TO SUPPRESSION POOL, Closes. • Adjust flow controller as required to achieve desired injection rate. Recognize and report the Reactor Core Isolation Cooling turbine has tripped Recognize and report that HPCS injection valve has lost power.
	SRO	Accept the report that RCIC has tripped Direct the BOP to reset the RCIC turbine trip
	BOP	Accept the direction to reset RCIC Direct the Reactor building operator to reset the RCIC turbine
	ROLE PLAY	As the reactor building operator when requested inform the BOP that Reactor Core Isolation Cooling Turbine has been reset
	BOP	Restart RCIC to maintain given level band
	BOP	Recognize and report that the High Pressure Core Spray injection valve breaker has tripped
	SRO	Contact Work Management Center about the High Pressure Core Spray injection valve.

Op-Test No.: _____ Scenario No.: 4 Event No.: 9 Page 10 of 10

Event Description:

MSS-MOV111/112 fails to isolate causing uncontrolled pressure drop.

Cue: MSS-MOV111/112 red lights off, green lights on following turbine trip.

Time	Position	Applicant's Actions or Behavior
	ATC	Recognize and report that reactor pressure is lowering due to unknown reasons
	SRO	Accept the report of reactor pressure lowering Direct the BOP and ATC to investigate the pressure loss.
	BOP / ATC	Recognize and report that the MSR steam supply valves did not respond as designed
	SRO	Direct the closure of MSS-MOV111 and 112 MSR Steam Supply Valves or MSIVs to avoid exceeding the cooldown rate.
	BOP	Close the MSS-MOV111 and 112 MSR Steam Supply Valve or MSIVs prior to exceeding the cooldown rate.