ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-SRO-ADM51
Revision: 00
Page: 1 of 12
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

DETERMINE CONDITION REPORT OPERABILITY AND COMPLETE PCRS ENTRIES

_____ MINOR _____X_____ MAJOR
REASON FOR REVISION: ___NEW JPM.

THIS DOCUMENT REPLACES N/A.

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

PREPARED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Determine Condition Report Operability and Complete PCRS entries

JPM No. GJPM-SRO-ADM51 Rev. 00 Page 2 of 12

Task List No: SRO-ADMIN-028

K/A Reference and Importance Factors (RO/SRO):

K/A GENERICS 2.2.21 – 3.5

SAFETY FUNCTION: N/A
10CFR55.45a(12 & 13)

Time Required for Completion: 20 Minutes (approximate).

Time Critical: YES/***NO***

Faulted JPM: YES/***NO***

ADMINISTRATIVE JPM

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom X Plant X Simulator X

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

DISCUSSION

Performance of this JPM will demonstrate the ability of a Senior Reactor Operator to properly evaluate a condition report for operability and complete the entries into the Paperless Condition Reporting System (PCRS).

Required Material(s):

01 Corporate Nuclear Management Manual Procedure LI-102, Corrective Action Process

02 Computer with the PCRS Training program

03 GGNS Technical Specifications/Technical Requirements Manual

04 Administrative Procedure 01-S-06-44, Operability Assessment

General Reference(s):

01 Corporate Nuclear Management Manual Procedure LI-102, Corrective Action Process

02 Computer with the PCRS Training program

03 GGNS Technical Specifications/Technical Requirements Manual

04 Administrative Procedure 01-S-06-44, Operability Assessment

Safety Consideration(s):

01 **ENSURE CANDIDATE DOES NOT USE THE ACTUAL PCRS PROGRAM.**

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Determine Condition Report Operability and Complete PCRS entries

JPM No. GJPM-SRO-ADM51 Rev. 00 Page 4 of 12

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ STANDARD to candidate.)

The PCRS has a condition report initiated for Division 3 Diesel Generator as EQUIPMENT INOPERABLE and Reportability as NOT REPORTABLE.

Initial Condition(s):

The plant is operating at 100% power. It is a Division III work week.

Initiating Cue(s):

At 1015 this morning, an operator doing Outside Rounds found oil on the Div 3 D/G pedestal and floor near the 'A' side Generator Bearing.

No oil can be seen in the sightglass for the bearing.

Frank Weaver is your Shift Manager today and is in a meeting for planned RWCU outage.

You are the Shift Supervisor. Initiate a CR and perform the Initial Operability/Reportability review

Start Time: _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

ONLY USE THE TRAINING PCRS COMPUTER PROGRAM!

Item 1 (*) Log on to the PCRS System.

Standard: Candidate logs onto a network computer with the PCRS System.

Comments: **If needed, CUE the candidate to use the training program LOGON ID: sro, PASSWORD: sro.**

SAT _____ **UNSAT** _____

Item 2 (*) Select the New CR button.

Standard: Candidate selects the New CR button.

Comments:

SAT _____ **UNSAT** _____

Item 3 (*) Enter "Frank Weaver" as Supervisor and "2374 or 6621" for phone # and "Operations Staff" for Originator Group.

Standard: Candidate enters "Frank Weaver" as Supervisor and "2374 or 6621" for phone # and "Operations Staff" for Originator Group.

Comments: **CUE if asked, which phone number to use, tell them the Control Room and "Operations Staff" for Originator Group.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 4 (*) Enter the initiating condition in the Initiating Condition text box.

Standard: Candidate enters the initiating condition in the Initiating Condition text box.

Comments: **Wording under the initiating condition does NOT have to be exact.**

SAT _____ **UNSAT** _____

Item 5 ( ) Enter immediate actions to be taken in the Immediate Action Description text box.

Standard: Candidate enters immediate actions to be taken in the Immediate Action Description text box.

Comments: This action is NOT required. Wording may include declared Division 3 Diesel Generator INOPERABLE and placed in Maintenance.

SAT _____ **UNSAT** _____

Item 6 ( ) Enter suggested actions to be taken in the Suggested Action Description text box.

Standard: Candidate enters suggested actions to be taken in the Suggested Action Description text box.

Comments: This action is NOT required. Wording may include locate and repair oil leak on 3 Diesel Generator and return to operable status.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 7 (*) Clicks the Initiate CR button and receives new CR#.

Standard: Candidate clicks the Initiate CR button and receives new CR#.

Comments:

SAT _____ **UNSAT** _____

Item 8 (*) Close New CR window.

Standard: Candidate closes New CR window.

Comments:

SAT _____ **UNSAT** _____

Item 9 (*) Double clicks the CR from Inbox.

Standard: Candidate double clicks the CR from Inbox.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 10 (*) Selects Operability tab and sets the dropdown for Immediate Report Code to NOT REPORTABLE.

Standard: Candidate selects Operability tab and sets the dropdown for Immediate Report Code to NOT REPORTABLE.

Comments:

SAT _____ **UNSAT** _____

Item 11 (*) Selects Operability tab and sets the dropdown for Operability Code to EQUIPMENT INOPERABLE.

Standard: Candidate selects Operability tab and sets the dropdown for Operability Code to EQUIPMENT INOPERABLE.

Comments:

SAT _____ **UNSAT** _____

Item 12 ( ) Enter reason for Operability Determination in the Operability Desc text box.

Standard: Candidate enters reason for Operability Determination in the Operability Desc text box.

Comments: **Not required for successful completion of task.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 13 (*) Clicks Perform button.

Standard: Candidate clicks Perform button.

Comments:

SAT _____ **UNSAT** _____

Item 18 ( ) Exit the computer application.

Standard: Candidate exits the computer application.

Comments:

SAT _____ **UNSAT** _____

TERMINATING CUE(s):

Candidate has completed PCRS entry and operability determination as EQUIPMENT INOPERABLE.

STOP TIME: _____

OVERALL COMMENTS:

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Determine Condition Report Operability and Complete PCRS entries

JPM No. GJPM-SRO-ADM51 Rev. 00 Page 11 of 12

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating

Expected Response Time

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

The plant is operating at 100% power. It is a Division III work week.

Initiating Cue(s):

At 1015 this morning, an operator doing Outside Rounds found oil on the Div 3 D/G pedestal and floor near the 'A' side Generator Bearing.

No oil can be seen in the sightglass for the bearing.

Frank Weaver is your Shift Manager today and is in a meeting for planned RWCU outage.

You are the Shift Supervisor. Initiate a CR and perform the Initial Operability/Reportability review

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-SRO-ADM52
Revision: 00
Page: 1 of 9
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

PLANT CHEMISTRY DETERMINATION

_____ MINOR _____X_____ MAJOR
REASON FOR REVISION: ___NEW JPM.

THIS DOCUMENT REPLACES N/A.

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

PREPARED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Plant Chemistry Determination

JPM No. GJPM-SRO-ADM52 Rev. 00 Page 2 of 9

Task List No: SRO-A&E-001; A&E-005; A&E-006; NO-015; NO-019

K/A Reference and Importance Factors (RO/SRO):

K/A GENERICS 2.1.34 – 2.9; 2.1.6 – 4.3; 2.1.7 – 4.4;
2.1.12 – 4.0; 2.1.33 – 4.0; 2.2.22 – 4.1;
2.4.4 – 4.3; 2.4.11 – 3.6

SAFETY FUNCTION: N/A
10CFR55.45a(12 & 13)

Time Required for Completion: 20 Minutes (approximate).

Time Critical: YES/***NO***

Faulted JPM: YES/***NO***

ADMINISTRATIVE JPM

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom X Plant X Simulator X

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

DISCUSSION

Performance of this JPM will demonstrate the ability of a Senior Reactor Operator to properly evaluate a chemistry sample in preparation for a change in plant operational modes.

Required Material(s):

01 Administrative Procedure 01-S-08-29, EPRI Water Chemistry Guidelines

02 IOI 03-1-01-1, Cold Shutdown to Generator Carrying Minimum Load

03 ONEP 05-1-02-V-12, Condensate/Reactor Water High Conductivity

04 GGNS Technical Specifications/Technical Requirements Manual (6.4.1)

05 Completed Chemistry Report

General Reference(s):

01 Administrative Procedure 01-S-08-29, EPRI Water Chemistry Guidelines

02 IOI 03-1-01-1, Cold Shutdown to Generator Carrying Minimum Load

03 ONEP 05-1-02-V-12, Condensate/Reactor Water High Conductivity

04 GGNS Technical Specifications/Technical Requirements Manual (6.4.1)

Safety Consideration(s):

01 None

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Plant Chemistry Determination

JPM No. GJPM-SRO-ADM52 Rev. 00 Page 4 of 9

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ STANDARD to candidate.)

Actions of the ONEP for Condensate/Reactor Water High Conductivity meet the requirements to manually scram the reactor and initiate RCIC for level control and isolate Condensate and Feedwater and place the Condensate and Feedwater Systems in cleanup and proceed to Cold Shutdown. See 05-1-02-V-12 section 3.5. Enter an LCO per TRM 6.4.1 Condition C. (restore to within limits 48 hour completion time.) (WORDING DOES NOT HAVE TO BE EXACT)

Initial Condition(s):

A plant startup is in progress in Operational Mode 2. Reactor Power is 11% at 950 psig ready for Main Turbine/Generator roll up.

Initiating Cue(s):

Plant Chemistry has just completed the required sampling of Condensate, Feedwater and Reactor Water in preparation for entry into Mode 1.

You are the Shift Manager. Review the Chemistry data and determine the course of action for plant operations.

SEE THE CHEMISTRY REPORT.

Start Time: _____

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Plant Chemistry Determination

JPM No. GJPM-SRO-ADM52 Rev. 00 Page 5 of 9

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 (*) Consult Admin Procedure 01-S-08-29, EPRI Water Chemistry Guidelines; ONEP 05-1-02-V-12, Condensate/Reactor Water High Conductivity; Technical Requirements Manual 6.4.1 Chemistry.

Standard: Candidate consults procedures and compares chemistry data to the procedures and standards and determines Reactor Water conductivity is out of limits requiring the following actions:

____ Manual scram of the reactor
____ Initiation of RCIC for level control
____ When RCIC and CRD can handle Reactor level control isolate Condensate and Feedwater and place them in cleanup.
____ Isolate the MSIVs and drains, use SRVs for Reactor pressure control
____ Proceed to Cold Shutdown within cooldown rate limits
____ Place the Main Condenser Hotwell Level controller in MANUAL at 50% to isolate the Hotwell from the CST and CRD.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

EVALUATOR NOTE: If candidate does not enter Tech Specs/TRM, the evaluator may cue the candidate to determine any Tech Spec actions.

Item 2 (*) Determines LCO entry for TRM 6.4.1 is required for Condition C.

Standard: Candidate determines LCO entry for TRM 6.4.1 is required for Condition C.

Comments: **CUE the candidate another SRO will complete LCO documentation.**

SAT _____ **UNSAT** _____

Item 3 ( ) Informs Duty Manager, the Plant startup is suspended and a reactor scram has been inserted due to out of limits Reactor Water Chemistry.

Standard: Candidate contacts Duty Manager.

Comments: **CUE the candidate Duty Manager understands conditions.**

SAT _____ **UNSAT** _____

TERMINATING CUE(s):

Candidate has determined the actions for out of limits Chemistry.

STOP TIME: _____

OVERALL COMMENTS:

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Plant Chemistry Determination

JPM No. GJPM-SRO-ADM52 Rev. 00 Page 8 of 9

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating

Expected Response Time

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

A plant startup is in progress in Operational Mode 2. Reactor Power is 11% at 950 psig ready for Main Turbine/Generator roll up.

Initiating Cue(s):

Plant Chemistry has just completed the required sampling of Condensate, Feedwater and Reactor Water in preparation for entry into Mode 1.

You are the Shift Manager. Review the Chemistry data and determine the course of action for plant operations.

SEE THE CHEMISTRY REPORT.

Preplanned PM (WO# 50327868-01) on Div 1 SPMU Outboard Isolation Valve 1E30F002A Limit Switch is scheduled for today. PM requires a taggout which opens the breaker for 1E30F001A with the valve closed. A LCOTR was not prepared during work preauthorization because the work package was not sent to the shift last week. Operators have informed you they have opened the breaker at 0943 to hang the red tag. Initiate the required LCO.

1. Candidate logs into eSOMS LCO Tracking System.

2. Candidate opens LCO Manger

3. Candidate clicks Add button to add new LCOTR by selecting Technical Specifications, Unit 1 and gets new LCOTR number

4. Candidate opens new LCOTR and adds Initiating Condition Information and System/Component # under the Detail Tab.

5. Candidate selects Condition Statements tab and clicks Add button.

6. Candidate selects Type “TS”, Unit “1”, and Section 3.6.2.4

7. Candidate clicks Display BM in MS Word button and reviews LCO 3.6.2.4 for applicable Conditions and Actions. (Not required if candidate uses hard copy TS)

8. Candidate clicks check box for Required Action C.1 and clicks OK button. (May also select Required Actions D.1 and D.2.)

9. Candidate highlights row with Condition C and Required Action C.1 and clicks the Enter Action Statement button.

10. Candidate selects Current Action Statement Only, sets the time to 0943 and clicks the OK button.

11. Candidate verifies check box for Condtion C is checked and selects the Actions/Timing tab.

12. Candidate clicks check box for Required Action C.1 and clicks OK button.

13. Candidate may select Equipment tab and add 1E30F002A and 1E30F001A from equipment manager.

14. Candidate may select Actions/Timing tab and verify clock has started on Required Action C.1.

15. Candidate may select Attributes tab and check the appropriate attributes.

16. Candidate selects Verification tab, double clicks the Prepared row and enters 0943 for the time.

17. Candidate selects Verification tab, double clicks the Implemented row and enters 0943 for the time.

18. Candidate may select Documents tab, and add WO# 50327868-01.

At 1015 this morning, an operator doing Outside Rounds found oil on the Div 3 D/G pedestal and floor near the 'A' side Generator Bearing. No oil can be seen in the sightglass for the bearing. Frank Weaver is your Shift Manager today and is in a meeting for planned RWCU outage.

Initiate a CR and perform the Initial Operability/Reportability review.

1. Candidate logs into PCRS System.

2. Candidate selects new CR button.

3. Candidate enters "Frank Weaver" as Supervisor, "2374 or 6621" for Phone #, and "Operations Staff" for Originator Group.

4. Candidate enters Initiating Condition Description text box.

5. Candidate may enter Immediate Action Description text box and Suggested Action Description text box.

6. Candidate clicks Initiate CR button and receives new CR #.

7. Candidate closes new CR window and double clicks the CR from the Inbox.

8. Candidate selects Operability tab and sets the dropdown for Immediate Report Code to NOT REPORTABLE, and the dropdown for Operability Code to EQUIPMENT INOPERABLE.

9. Candidate enters reason for Operability Determination in the Operability Desc. text box.

10. Candidate clicks Perform button.

END OF TASK

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-OP-ADM33
Revision: 01
Page: 1 of 13
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

ADMINISTRATIVE JPM
ENTRY AND EGRESS FROM THE CONTROLLED ACCESS AREA (CAA) WITH ENTRY REQUIREMENTS FOR ACCESSING A HIGH CONTAMINATION AREA

_____X_____ MINOR _____ MAJOR

REASON FOR REVISION: Update NRC 6/2001 JPM for NRC 2/2004 .

THIS DOCUMENT REPLACES GG-1-JPM-OP-ADM33.00 .

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Entry and Egress from the Controlled Access Area (CAA) with entry requirements for accessing a High Contamination Area.

JPM No. GJPM-OP-ADM33 Rev. 01 Page 2 of 13

Task List No: AON-ADMIN-022; 025

K/A Reference and Importance Factors (RO/SRO):

K/A GENERIC 2.3.1 - 2.6; 2.3.4 - 2.5; 2.3.5 - 2.3

SAFETY FUNCTION: N/A
Radiological Protection Generic Section 3

Time Required for Completion: N/A Minutes (approximate). Time for this JPM will vary based on time spent inside CAA performing other JPMs.

Time Critical: YES/***NO***

Faulted JPM: YES/***NO***

Administrative JPM

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom _____ Plant X Simulator _____

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Entry and Egress from the Controlled Access Area (CAA) with entry requirements for accessing a High Contamination Area.

DISCUSSION

This JPM will evaluate the candidate's ability to enter the GGNS Controlled Access Area (CAA) observing all applicable radiation practices for operators entering the Power Block and the procedures for exiting the CAA. Prior to entry into the CAA, the candidate will be informed to enter an area designated as a High Contamination Area. The proper method of evaluation is by the candidate performing entry into the Controlled Access Area of GGNS and exiting the area.

This JPM will be performed in conjunction with other JPMs performed inside the CAA.

Required Material(s):

01 Key Card
02 TLD
03 Electronic alarming dosimeter
04 Hard Hat
05 Safety Glasses
06 Ear Plugs
07 Paper coveralls (Optional)

General Reference(s):

01 Administrative Procedure 01-S-08-34
Radiological Work Planning, Performance, and Reviews

02 Administrative Procedure 01-S-08-2, Exposure & Contamination Control.

Safety Consideration(s):

01 Normal plant access safety materials.

IT IS RECOMMENDED TO WEAR PAPER COVERALLS TO REDUCE TIME.

GIVE CANDIDATE THE INSTRUCTIONS FOR THIS JPM PRIOR TO ENTRY INTO SECURITY ISLAND.

DISCUSSION IS ON THE NEXT PAGE UNDER INITIATING CUE.

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s):

Enters and exits GGNS Controlled Access Area per Radiation Work Permit requirements and obtains required briefings and dosimetry for entry into a High Contamination Area.

Initial Condition(s): (The location for the initial conditions to be given is Security Island.)

N/A

Initiating Cue(s):

NOTE to Evaluator: Explain to the Candidate that you will be observing and grading the radiological practices performed by the candidate during the entry, activities inside the CAA, and exit of the CAA. INFORM THE CANDIDATE PART OF THE ENTRY WILL REQUIRE ENTRY INTO THE REACTOR WATER CLEANUP 'A' PUMP ROOM.

This JPM will be performed in conjunction with other JPMs performed inside the CAA.

Start Time: _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 (*) Has Key Card and TLD.

Standard: Candidate should have Key Card and TLD in their possession.

Comments:

SAT _____ **UNSAT** _____

Item 2 (*) Wears Hard Hat and Safety Glasses inside the CAA as required.

Standard: Candidate has a hard hat and safety glasses for entry into the CAA. Candidate may obtain ear plugs and safety glasses in the Health Physics Lab on 93 foot elevation of the Control Building.

Comments:

SAT _____ **UNSAT** _____

EVALUATOR:

CUE THE CANDIDATE THAT DURING THE FACILITY WALK THROUGH YOU WILL NEED TO GO TO REACTOR WATER CLEANUP 'A' PUMP ROOM. (This area should be a High Contamination Area.)

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 3 (*) Informs the Health Physics Technician/Supervisor at the 93 ft HP desk that part of the Job will involve entry into the Reactor Water Cleanup (RWCU) 'A' Pump Room. Obtain the HP Pre-Job brief and permission for entry.

Standard: Candidate will inform HP of the entry into RWCU 'A' Pump Room and receive the Pre-Job brief and permission to enter a High Contamination Area.

Comments: **The Evaluator may be required to discuss the entry in private with the Health Physics personnel this is only a test and the operator will NOT be entering the RWCU 'A' Pump Room.**

SAT _____ **UNSAT** _____

Do NOT allow candidate to enter the RWCU 'A' Pump Room. This is based on ALARA considerations.

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 4 (*) Obtain Electronic Alarming Dosimeter from the Health Physics Lab and activate at the access turnstile using appropriate Radiation Work Permit (RWP) number and enters CAA when access is granted.

Standard: Candidate will obtain an Electronic Alarming Dosimeter and insert the Electronic Alarming Dosimeter into the activation slot and SCAN the bar code on his TLD and follow instructions on the screen. Entering RWP number and answering the questions on the computer fields of the access terminal. Once all fields have been entered appropriately access is granted.

Comments: **The RWP Number will be either 2004-1002 or 2004-1005 either RWP number is acceptable dependent on the candidate's authorization.**

NOTE: USE OF PAPER SUITS IS HIGHLY RECOMMENDED DUE TO RADON PROBLEMS IN THE PLANT!!

SAT _____ **UNSAT** _____

Do NOT allow candidate to enter the RWCU 'A' Pump Room. This is based on ALARA considerations.

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 5 (*) While in CAA the candidate observes and adheres to ALL applicable Postings and entry requirements.

Standard: While in CAA the candidate observes and adheres to ALL applicable Postings and entry requirements.

Comments: **EVALUATOR SHOULD DISCUSS ACTIONS FOR ENTRY INTO A HIGH CONTAMINATION AREA.**

NOTE: None of the areas for the JPMs should access any High Radiation Areas, Contamination Areas, or High Contamination Areas.

SAT _____ **UNSAT** _____

Do NOT allow candidate to enter the RWCU 'A' Pump Room. This is based on ALARA considerations.

Item 6 (*) Exiting of the CAA the candidate enters the control point area and enters a PCM-2 Monitor.

Standard: Candidate clears PCM-2 Monitor and exits.

Comments: **If candidate shows radon contamination portions of apparel may be left with Health Physics for decay. This is NORMAL. If paper suits are used and found to have radon, they may be left in HP.**

SEQUENCE for ITEMS 6 and 7 are **NOT CRITICAL.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 7 (*) If hand carried materials were carried into the CAA they will be cleared through the Tool Contamination Monitor (TCM).

Standard: Candidate will place hand carried items in the TCM for counting.

Comments: **If candidate has no hand carried items this item is N/A.**

SEQUENCE for ITEMS 6 and 7 are **NOT CRITICAL.**

SAT _____ **UNSAT** _____

Item 8 (*) After clearing the PCM-2 the candidate exits through the Portal Monitor.

Standard: Candidate clears Portal Monitor and exits.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 9 (*) Deactivates Electronic Alarming Dosimeter at terminal at final exit of session.

Standard: Candidate will deactivate his Electronic Alarming Dosimeter and return it to Health Physics rack.

Comments:

SAT _____ **UNSAT**

TERMINATING CUE(s):

Entry and exit of Controlled Access Area is completed.

STOP TIME: _____

OVERALL COMMENTS:

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Entry and Egress from the Controlled Access Area (CAA) with entry requirements for accessing a High Contamination Area.

JPM No. GJPM-OP-ADM33 Rev. 01 Page 13 of 13

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating

Expected Response Time

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-SRO-A&E55
Revision: 00
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QA Record
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TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

EAL CLASSIFICATION: NRC 2/2004

_____ MINOR _____X_____ MAJOR
REASON FOR REVISION: NEW JPM.

THIS DOCUMENT REPLACES N/A.

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

PREPARED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: EAL Classification: NRC 2/2004

JPM No. GJPM-SRO-A&E55 Rev. 00 Page 2 of 9

Task List No: SRO-A&E-015; SRO-A&E-041

K/A Reference and Importance Factors (RO/SRO):

K/A 2.4.41 – 4.1; 2.4.40 – 4.0; 2.4.30 – 3.6

SAFETY FUNCTION: N/A
10CFR55.45a(11)

Time Required for Completion: 15 Minutes (approximate).

Time Critical: YES/**NO**

Faulted JPM: YES/**NO**

ADMINISTRATIVE JPM

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom X Plant X Simulator X

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

Task Title: EAL Classification: NRC 2/2004

DISCUSSION

Performance of this JPM will demonstrate the ability of a Senior Reactor Operator to properly classify emergency events per Emergency Plan Procedure 10-S-01-1 and determine the actions to be taken and complete the required Emergency Notification Form. Performance can be performed in the simulator, plant or in a classroom setting provided candidate has access to Emergency Plan Procedures.

Required Material(s):

01 EPP 10-S-01-1, Activation of the Emergency Plan

02 EPP 06-01, EMERGENCY NOTIFICATION FORM

03 ONEP 05-1-02-VI-4, Security Threat

General Reference(s):

01 EPP 10-S-01-1, Activation of the Emergency Plan

02 EPP 10-S-01-6, Notification of Offsite Agencies and Plant On-Call Personnel

03 ONEP 05-1-02-VI-4, Security Threat

Safety Consideration(s):

01 None

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: EAL Classification: NRC 2/2004

JPM No. GJPM-SRO-A&E55 Rev. 00 Page 4 of 9

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ STANDARD to candidate.)

Emergency Plan is applied to classify the event as a SITE AREA EMERGENCY per EAL 14.4.1 and the Emergency Notification form is completed (See Attached).

Initial Condition(s):

The plant is operating at 100% power. Thunder showers are reported in Tensas Parish. The RHR Pump C and CCW Pump B were red tagged for repairs. Armed personnel have entered company property in an armored personnel carrier and have penetrated the Protected Area security fence. GGNS Security personnel are engaging the perpetrators in the Turbine Building on elevation 133 foot. Operations shift staff is fully manned and performing their normal duties.

Initiating Cue(s):

Determine the Emergency Action Level Classification, if any, and if required complete the required Emergency Notification Form and describe the PLANT actions that you would direct for these conditions. Communicators are available if required.
ASSUME YOU ARE THE SHIFT MANAGER AND THE EVENT IS STILL IN PROGRESS.

Start Time: _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 (*) Consult EPP 10-S-01-1 "Activation of the Emergency Plan" and classifies a **SITE AREA EMERGENCY**.

Standard: Candidate consults EPP 10-S-01-1 "Activation of the Emergency Plan" EAL 14.4.1 and classifies an **SITE AREA EMERGENCY** based on armed adversaries entering the Power Block. Security Condition is **RED**.

Comments:

SAT _____ **UNSAT** _____

Items 2, 3, and 4 are NOT required to be performed in any specific order.

Item 2 (*) Complete the Emergency Notification form EPP 06-01 for a SITE AREA EMERGENCY.

Standard: Candidate completes Emergency Notification form EPP 06-01 with data marked with an * (See Attached).

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 3 (*) Announce over the Site PA and Site Paging Phone # 7929 "There is a Site Security Code RED in affect and all personnel are to take cover immediately until further notice."

Standard: Candidate consults EPP 10-S-01-1 "Activation of the Emergency Plan" and states he would announce over the Site PA and Site Paging Phone # 7929 "There is a Site Security Code RED in affect and all personnel are to take cover immediately until further notice."

Comments: **SIMULATE THE ANNOUNCEMENT ONLY!**

SAT _____ **UNSAT** _____

EVALUATOR NOTE: If the candidate does note discuss actions of the ONEP a cue is acceptable to determine the course of action for plant operations.

Item 4 (*) Initiate a manual scram of the reactor.

Standard: Candidate states he would order a manual scram of the reactor.

Comments: Candidate may discuss other actions to be taken per 10-S-01-1 section 6.1.5 and 05-1-02-VI-4. Those actions are not required for successful completion of the JPM.

SAT _____ **UNSAT** _____

TERMINATING CUE(s):

Emergency Plan is applied to classify the event as a SITE AREA EMERGENCY per EAL 14.4.1 and the Emergency Notification form is completed (See Attached).

Proper announcements have been made and the reactor scram ordered.

STOP TIME: _____

OVERALL COMMENTS:

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: EAL Classification: NRC 2/2004

JPM No. GJPM-SRO-A&E55 Rev. 00 Page 8 of 9

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating

Expected Response Time

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

The plant is operating at 100% power. Thunder showers are reported in Tensas Parish. The RHR Pump C and CCW Pump B were red tagged for repairs. Armed personnel have entered company property in an armored personnel carrier and have penetrated the Protected Area security fence. GGNS Security personnel are engaging the perpetrators in the Turbine Building on elevation 133 foot. Operations shift staff is fully manned and performing their normal duties.

Initiating Cue(s):

Determine the Emergency Action Level Classification, if any, and if required complete the required Emergency Notification Form and describe the PLANT actions that you would direct for these conditions. Communicators are available if required.

ASSUME YOU ARE THE SHIFT MANAGER
AND
THE EVENT IS STILL IN PROGRESS.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-SRO-ADM50
Revision: 00
Page: 1 of 13
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

DETERMINE LCO ACTIONS AND COMPLETE AN eSOMS LCO

_____ MINOR _____X_____ MAJOR
REASON FOR REVISION: NEW JPM.

THIS DOCUMENT REPLACES N/A.

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

PREPARED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Determine LCO Actions and Complete eSOMS LCO

JPM No. GJPM-SRO-ADM50 Rev. 00 Page 2 of 13

Task List No: SRO-ADMIN-038

K/A Reference and Importance Factors (RO/SRO):

K/A GENERICS 2.1.12 – 4.0; 2.2.23 – 3.8; 2.2.22 – 4.1;

SAFETY FUNCTION: N/A
10CFR55.45a(12 & 13)

Time Required for Completion: 20 Minutes (approximate).

Time Critical: YES/***NO***

Faulted JPM: YES/***NO***

ADMINISTRATIVE JPM

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom X Plant X Simulator X

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

DISCUSSION

Performance of this JPM will demonstrate the ability of a Senior Reactor Operator to properly evaluate a component and determine Technical Specification applicability, actions to be taken and complete the applicable LCO entries into ESOMS.

Required Material(s):

01 Administrative Procedure 02-S-01-17, Control of Limiting Conditions for Operation

02 Computer with the ESOMS Training LCO program

03 GGNS Technical Specifications/Technical Requirements Manual

General Reference(s):

01 Administrative Procedure 02-S-01-17, Control of Limiting Conditions for Operation

02 Computer with the ESOMS Training LCO program

03 GGNS Technical Specifications/Technical Requirements Manual

Safety Consideration(s):

01 **ENSURE CANDIDATE DOES NOT USE THE ACTUAL PLANT LCO PROGRAM.**

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Determine LCO Actions and Complete eSOMS LCO

JPM No. GJPM-SRO-ADM50 Rev. 00 Page 4 of 13

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ STANDARD to candidate.)

The eSOMS LCOTR has been initiated for Tech Spec 3.6.2.4 Condition C.1.

Initial Condition(s):

The plant is operating at 100% power. It is a Division I work week.

Initiating Cue(s):

Preplanned PM (WO# 50327868-01) on Div 1 SPMU Outboard Isolation Valve 1E30F002A Limit Switch is scheduled for today.

PM requires a tag out which opens the breaker for 1E30F001A with the valve closed.

A LCOTR was not prepared during work preauthorization because the work package was not sent to the shift last week.

Operators have informed you they have opened the breaker at 0943 to hang the red tag.

You are the Shift Supervisor. Initiate the appropriate eSOMS LCOTR through IMPLEMENTATION.

Start Time: _____

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Determine LCO Actions and Complete eSOMS LCO

JPM No. GJPM-SRO-ADM50 Rev. 00 Page 5 of 13

NOTE: **Critical items** denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

Item 1 (*) Log on to the eSOMS LCO Tracking System.

Standard: Candidate logs onto a network computer with the eSOMS LCO Tracking System.

Comments: **If needed, CUE the candidate to use the training program LOGON ID: sro, PASSWORD: sro.**

SAT _____ **UNSAT** _____

Item 2 (*) Open LCO Manager.

Standard: Candidate opens LCO Manager.

Comments:

SAT _____ **UNSAT** _____

Item 3 (*) Click ADD button to add a new LCOTR and selects Technical Specifications, Unit 1, then receives a new LCOTR number.

Standard: Candidate clicks ADD button and selects Technical Specifications, and Unit 1.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 4 (*) Open the new LCOTR and adds initiating condition information and System/Component # under detail tab.

Standard: Candidate opens the new LCOTR and adds information in the Initiating Condition and System/ Component # under the detail tab.

Comments: **Wording under the initiating condition does NOT have to be exact. 1E30F002A out of service for planned maintenance and 1E30F001A tagged closed.**

SAT _____ **UNSAT** _____

Item 5 (*) Select Condition Statements tab and click ADD button.

Standard: Candidate selects Condition Statements tab and clicks ADD.

Comments:

SAT _____ **UNSAT** _____

Item 6 (*) Selects Type "TS", "Unit 1" and Section 3.6.2.4.

Standard: Candidate select Type "TS", "Unit 1" and section 3.6.2.4.

Comments: **Candidate may use the hard copy of Tech Specs, the Reference Library, or Display BM in MS Word to review the appropriate LCOs.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 7 (*) Clicks the box for Required Action C.1 and selects OK button.

Standard: Candidate clicks the box for Required Action C.1 of Tech Spec 3.6.2.4 and selects OK.

Comments: **Candidate may also select Required Actions D.1 and D.2, these two actions are NOT critical.**

SAT _____ **UNSAT** _____

Item 8 ( ) Highlights row with Condition C and Required Action C.1 and clicks Enter Action Statement button.

Standard: Candidate highlights row with Condition C and Required Action C.1 and clicks Enter Action Statement button.

Comments:

SAT _____ **UNSAT** _____

Item 9 (*) Selects Current Action Statement Only and sets the time to 0943 and clicks OK button.

Standard: Candidate selects Current Action Statement Only and sets the time to 0943 and clicks OK button.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 10 (*) Verifies check box for Condition C.1 is checked and selects Actions/Timing tab.

Standard: Candidate verifies check box for Condition C.1 is checked and selects Actions/Timing tab.

Comments:

SAT _____ **UNSAT** _____

Item 11 (*) Clicks check box for Required Action C.1 and clicks OK button.

Standard: Candidate clicks check box for Required Action C.1 and clicks OK button.

Comments: Observes time start timing.

SAT _____ **UNSAT** _____

Item 12 ( ) Selects Equipment tab and adds 1E30F002A and 1E30F001A from Equipment Manager.

Standard: Candidate selects Equipment tab and adds 1E30F002A and 1E30F001A from Equipment Manager.

Comments: **This action adds to the data base for historical purposes. Not required for successful completion of task.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 13 ( ) Select Actions/Timing tab and verifies clock has started on Required Action C.1.

Standard: Candidate selects Actions/Timing tab and verifies clock has started on Required Action C.1.

Comments: Not required for successful completion of task.

SAT _____ **UNSAT** _____

Item 14 ( ) Select Attributes tab and check appropriate attributes.

Standard: Candidate selects Attributes tab and check appropriate attributes.

Comments: Not required for successful completion of task.

SAT _____ **UNSAT** _____

Item 15 (*) Selects Verification tab and double clicks Prepared row and enters 0943 for time.

Standard: Candidate selects Verification tab and double clicks Prepared row and enters 0943 for time.

Comments: **Time is NOT Critical but must complete preparation and implementation for LCO to be ready for Shift Manager. Candidate may enter their name, not required.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

Item 16 (*) Selects Verification tab and double clicks Implemented row and enters 0943 for time.

Standard: Candidate selects Verification tab and double clicks Implemented row and enters 0943 for time.

Comments: **Time is NOT Critical but must complete preparation and implementation for LCO to be ready for Shift Manager. Candidate may enter their name, not required.**

SAT _____ **UNSAT** _____

Item 17 ( ) Select Documents tab and add WO# 50327868-01.

Standard: Candidate selects Documents tab and add WO# 50327868-01.

Comments: Not required for successful completion of task.

SAT _____ **UNSAT** _____

Item 18 ( ) Exit the computer application.

Standard: Candidate exits the computer application.

Comments:

SAT _____ **UNSAT** _____

TERMINATING CUE(s):

Candidate has completed LCOTR for Tech Spec 3.6.2.4 Condition C.1.

STOP TIME: _____

OVERALL COMMENTS:

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating

Expected Response Time

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

The plant is operating at 100% power. It is a Division I work week.

Initiating Cue(s):

Preplanned PM (WO# 50327868-01) on Div 1 SPMU Outboard Isolation Valve 1E30F002A Limit Switch is scheduled for today.

PM requires a tag out which opens the breaker for 1E30F001A with the valve closed.

A LCOTR was not prepared during work preauthorization because the work package was not sent to the shift last week.

Operators have informed you they have opened the breaker at 0943 to hang the red tag.

You are the Shift Supervisor. Initiate the appropriate eSOMS LCOTR through IMPLEMENTATION.

LOGON ID for eSOMS LCOTR Training: sro
PASSWORD: sro

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-RO-E1212
Revision: 01
Page: 1 of 14
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

STARTUP RHR SHUTDOWN COOLING ALTERNATE PATH E12-F053 FAILS TO OPEN

_____**X**_____ MINOR _____ MAJOR

REASON FOR REVISION: Update JPM from NRC 3/1998 exam for NRC 2/2004.

THIS DOCUMENT REPLACES GG-1-JPM-RO-E1212.00 .

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____
Reviewer

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Startup of Shutdown Cooling RHR 'B'

JPM No. GJPM-RO-E1212 Rev. 01 Page 2 of 14

Task List No: CRO-E12-008

K/A Reference and Importance Factors (RO/SRO):

K/A 205000 A1.02 - 3.3/3.2; A2.10 – 2.9/2.9; A2.12 - 2.9/3.0; A4.01 - 3.7/3.7; A4.02 - 3.6/3.5; A4.03 - 3.6/3.5; A4.09 – 3.1/3.1

SAFETY FUNCTION: 4
RO Group 2
SRO Group 2
10CFR 55.45(a) (3, 4, 5, 6, 7)

Time Required for Completion: 20 Minutes (approximate).

Time Critical: YES/***NO***

Faulted: ***YES***/NO

Simulator

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom _____ Plant _____ Simulator X

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

DISCUSSION

This JPM will evaluate the candidate's ability to manipulate the controls required to startup RHR in Shutdown Cooling and respond to a failure of the E12-F053B Shutdown Cooling Injection Valve to open. This JPM should be performed in the simulator, but may be simulated in the plant / control room.

Set up the simulator as follows:

1. Initialize the simulator to a Startup/Shutdown IC.
2. Insert override **di_1e12m615b** P601/17C E12-F053B **CLOSE.**
3. Close or verify Closed E12-F064B RHR B Minimum Flow Valve.
4. Close E12-F004B RHR B Suppression Pool Suction Valve.
5. Open E12-F006B, F008, F009 RHR B Shutdown Cooling Suction Valves.
6. Startup SSW B and align through the RHR B Heat Exchangers and startup the RHR B Room Cooler.
7. Insert the following overrides on **Trigger 1**
   lo_1e12m615b_g E12-F053B indication **OFF**
   lo_1e12ads12 P601/17B RHR B MOV Overload Power loss **ON** (Status light)
   p601_17a_h_2 RHR B SYS OOSVC **ON (1)** (Annunciator)

Required Material(s):

01 04-1-01-E12-2, Shutdown Cooling and Alternate Decay Heat Removal Operation

General Reference(s):

01 04-1-01-E12-2, Shutdown Cooling and Alternate Decay Heat Removal Operation

Safety Consideration(s):

01 If this JPM is being simulated in the plant/ control room, **DO NOT MANIPULATE ANY PLANT CONTROLS/EQUIPMENT.**

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s):(DO NOT READ Standard to candidate.)

The candidate will startup RHR B Shutdown Cooling and notice that E12-F053B did not open. Once noted the candidate should either trip RHR "B" pump or open E12-F042B RHR "B" LPCI Injection Valve.

NOTE: If candidate fails to take actions prior to RPV level dropping to +11.4 inches, this constitutes a failure. If level drops to +11.4 inches after action has been initiated, this does NOT constitute a failure.

Initial Condition(s):

The plant is shutdown in mode 4. RHR "B" has been flushed and warmed and is ready to be placed in Shutdown Cooling. SSW "B" is in-service to the RHR "B" Heat Exchangers. Steps 4.2.2a & b and 4.2.2c 1 - 4 of 04-1-01-E12-2 have been completed.

Initiating Cue(s):

The Control Room Supervisor has requested you to startup RHR "B" Shutdown Cooling with a minimal cooldown using option 1 flowpath.

NOTE: If asked flow is to be 5000 gpm.

Start Time: _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 ( ) Places MOV TEST Switches for RHR A, NSSSS Division 1 and 2 to TEST.

Standard: Places the RHR B, NSSSS Division 1 and 2 MOV TEST Switches 1H13-P601 section 17B, 19B, 18B in TEST.

Comments: MOV Test Switch annunciators will come in indicating in test.

SAT _____ **UNSAT** _____

Item 2 ( ) Close or check closed E12-F064B.

Standard: Check closed E12-F064B RHR B Minimum Flow Valve noting green light indication on H13-P601-17C is ON.

Comments: E12-F064B should already be closed from the warmup process.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 3 ( ) Turn off or verify off the RHR B Jockey Pump and close or check closed E12-F082B RHR B Jockey Pump Suction Valve.

Standard: RHR B Jockey Pump and E12-F082B have been checked off and closed on Control Room back panel H13-P872.

Comments: **If asked, cue the candidate the RHR B Jockey Pump is off and E12-F082B RHR B Jockey Pump Suction Valve is closed.**

SAT _____ **UNSAT** _____

Item 4 ( ) Dispatch an operator to unlock and close or check closed E12-F428B, Pressure Lock Isolation for F024B and E12-F438B, Pressure Lock Isolation for E12-F064B.

Standard: Operator dispatched and confirmation that E12-F428B and F438B are closed.

CUE as the Building Operator report that E12-F428B and F438B are closed.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 5 ( ) Close or check closed E12-F004B.

Standard: Check closed E12-F004B RHR B Suppression Pool Suction Valve noting green light indication on H13-P601-17C is ON.

Comments: E12-F004B should already be closed from the warmup process.

SAT _____ **UNSAT** _____

Item 6 ( ) Open or check open E12-F010; F008; F009; F006B; F047B; and F048B.

Standard: Check OPEN E12-F010 _____

Check OPEN E12-F008 _____

Check OPEN E12-F009 _____

Check OPEN E12-F006B _____

Check OPEN E12-F047B _____

Check OPEN E12-F048 _____

noting red light indication on H13-P601-17C is ON.

Comments: These valve should already be open from the warmup process.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 7 (*) Close E12-F003B RHR B Heat Exchanger Outlet Valve.

Standard: E12-F003B is closed as indicated by Position Indicator E12-ZI-R611B indicating 0% on H13-P601-17B.

Comments: This is to minimize cooldown.

SAT _____ **UNSAT** _____

Item 8 ( ) Close or check closed B21-F065B, FDW INL Shutoff Vlv.

Standard: Candidate closes B21-F065B on H13-P680-2C as indicated by the green indicating light is ON.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 9 ( ) Open or check open E12-F027B.

Standard: Checks that E12-F027B is open on H13-P601-17C as indicated by the red indicating light being ON.

Comments: Candidate may note the OPTION they have been instructed to use is Option 1.

SAT _____ **UNSAT** _____

Item 10 (*) Start RHR Pump B using the handswitch on H13-P601-17C.

Standard: Candidate starts RHR B Pump as indicated by red indicating light being ON.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

SIMULATOR OPEATOR ACTIVATE TRIGGER 1.

Item 11 (*) Open E12-F053B.

Standard: Opens E12-F053B using the handswitch on H13-P601-17C. Notes the failure of the valve to begin opening.

Comments: **The candidate may perform any of the following Items 12 or 13. The candidate may or may not solicit input from the Plant Supervisor. If input is solicited CUE the candidate to take appropriate actions to prevent reactor water from entering the Suppression Pool.**

SAT _____ **UNSAT** _____

NOTE to EVALUATOR: Items 12 and 13 are the two different paths.

Item 12 (*) Trips RHR B Pump.

Standard: Places handswitch for RHR B Pump on H13-P601-17C to STOP and notes green light indication is ON.

Comments: **This action will prevent the E12-F064B from coming open on minimum flow.**

NOTE: If the candidate performs this item CUE the candidate as Control Room Supervisor to stop the evolution at this point until the problem can be resolved.

ITEM 13 may be performed instead of this Item. If Item 13 is performed then Item 12 is NOT CRITICAL.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

Item 13 (*) Open E12-F042B RHR B LPCI Injection Valve.

Standard: E12-F042B RHR B LPCI Injection Valve handswitch is taken to open on H13-P601-17C as indicated by red indicating light is ON.

Comments: **If this path is chosen by the candidate, he must note the altered lineup to the Control Room Supervisor. If this step is performed and asked CUE the candidate to establish flow of 5000 GPM through the heat exchanger bypass valve.**

If NOT asked full flow through the E12-F048B is acceptable based on CAUTION page 40.

IF PUMP WAS TRIPPED THIS STEP WILL NOT BE PERFORMED. IF ITEM 12 WAS PERFORMED THIS ITEM IS NOT CRITICAL.

SAT _____ **UNSAT** _____

Item 14 ( ) Throttles closed on E12-F048B to establish 5000 gpm RHR B flow.

Standard: Throttles E12-F048B closed using the handswitch on H13-P601-17C.

Comments: **IF PUMP WAS TRIPPED THIS STEP WILL NOT BE PERFORMED.**

SAT _____ **UNSAT** _____

TERMINATING CUE(s)

RHR B Shutdown Cooling is secured OR is running to the reactor via E12-F042B.

STOP TIME: _____

OVERALL COMMENTS:

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating _____

Expected Response Time _____

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

The plant is shutdown in mode 4. RHR "B" has been flushed and warmed and is ready to be placed in Shutdown Cooling. SSW "B" is in-service to the RHR "B" Heat Exchangers. Steps 4.2.2a & b and 4.2.2c 1 - 4 of 04-1-01-E12-2 have been completed.

Initiating Cue(s):

The Control Room Supervisor has requested you to startup RHR "B" Shutdown Cooling with a minimal cooldown using option 1 flowpath.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-NLO-EP026
Revision: 01
Page: 1 of 12
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

ALIGN FIRE WATER FOR INJECTION TO THE REACTOR VIA LPCS AND RHR 'C' PER EP-2 ATTACHMENT 26

Minor _____X_____ Major _____
REASON FOR REVISION: update for NRC Exam 2/2004.

THIS DOCUMENT REPLACES GG-1-JPM-RO-EP026.00.

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: ALIGN FIRE WATER FOR INJECTION TO THE REACTOR VIA LPCS AND RHR 'C' PER EP-2 ATTACHMENT 26

JPM No. GJPM-NLO-EP026 Rev. 01 Page 2 of 12

Task List No: CRO-EP-026; AON-EP-007

K/A Reference and Importance Factors (RO/SRO):

K/A 286000 A1.05: 3.2/3.2
295031 EA1.08: 3.8/3.9
2.1.30: 3.9/3.4; 2.4.35: 3.3/3.5

SAFETY FUNCTION – 2 & 8
RO Group 2
SRO Group 2
10 CFR 55.45 (a) (7 & 8)

Time Required for Completion: 20 Minutes (approximate).

Time Critical: YES/***NO***
Faulted JPM: YES/***NO***

ENTERS RCA
Abnormal procedure implementation in the plant.

APPLICABLE METHOD OF TESTING

Performance: Simulate X Actual

Setting: Classroom _____ Plant X Simulator

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

DISCUSSION

This JPM will evaluate the candidate's ability to perform EP-2 Attachment 26 for LPCS and RHR 'C'. This attachment aligns LPCS and RHR 'C' to the Fire Protection Water System for injection of fire water into the Reactor during a LOCA.

This JPM will be performed in the Auxiliary Building 119 ft elevation.

Contact Radiation Protection prior to entry into the Piping Penetration Room.

Required Material(s):

01 05-S-01-EP-2 Attachment 26 – Injection into RPV with Fire Protection Water System

02 Fire Spanner wrench

General Reference(s):

01 05-S-01-EP-2 Attachment 26 – Injection into RPV with Fire Protection Water System

Safety Consideration(s):

01 **Observe radiological conditions in the plant and ALARA.**

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: ALIGN FIRE WATER FOR INJECTION TO THE REACTOR VIA LPCS AND RHR 'C' PER EP-2 ATTACHMENT 26

JPM No. GJPM-NLO-EP026 Rev. 01 Page 4 of 12

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ STANDARD to candidate.)

Fire hoses have been attached to LPCS and RHR'C' injection lines per EP-2 Attachment 26 paths 2 & 3.

Initial Condition(s): (The location for the initial conditions to be given is Control Room or in the Auxiliary Building.)

A LOCA has occurred. The reactor is shutdown with RPV level still lowering. The SRO with the Command Function is implementing EP-2 actions.

Initiating Cue(s):

The SRO with the Command Function has directed you to obtain EP-2 Attachment 26 Injection into RPV with Fire Protection Water System. Align LPCS and RHR 'C' for injection with Fire Water. Plant Services is dispatching a ladder and extra fire hoses to the area. Steps 2.1 through 2.3.2 are complete of Attachment 26.

Give the candidate a copy of Attachment 26.

Start Time: _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 ( ) Obtain a fire spanner wrench from a fire locker.

Standard: Candidate has obtained a fire spanner wrench from a fire locker.

Comments: Any Fire Locker in the plant has fire spanner wrenches in the pocket of the fire turnout gear. **Once candidate finds a fire locker and indicates spanners are there, cue the candidate they have a spanner.**

SAT _____ **UNSAT** _____

PATH 3 MAY BE DONE PRIOR TO PATH 2 SEQUENCE OF PATHS IS NOT CRITICAL.

FOR RHR 'C' path # 2

Item 2 (*) Locate fire hose station 13B in area 9 119 ft by the stairwell and connects extra length of fire hose.

Standard: Locates fire hose station 13B on 119 ft elevation and connects extra length of fire hose.

Comments: Do not let the candidate remove the hose from the reel or remove the nozzle from the hose.

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 3 (*) Locate E12-F056C and E12-F057C, RPV Fill Connection.

Standard: Locates E12-F056C and E12-F057C RPV Fill Connection in the Piping Penetration Room in area 9/10 119 ft.

Comments: Valves are located straight ahead from the door in the overhead.

SAT _____ **UNSAT** _____

Item 4 (*) Connects the fire hose to E12-F056C and E12-F057C.

Standard: Hose is connected to E12-F056C and E12-F057C.

Comments: **CUE the candidate the fire hose is connected to E12-F056C and E12-F057C.**

SAT _____ **UNSAT** _____

ITEM 6 MAY BE DONE BEFORE ITEM 5 SEQUENCE IS NOT CRITICAL.

Item 5 (*) Locate P64-FA12V fire hose isolation valve and opens the valve.

Standard: Locates P64-FA12V and opens the valve.

Comments: **Cue the candidate the resistance is found on the valve in the counter clockwise direction. P64-FA12V is the hose station isolation valve.**

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 6 (*) Open E12-F056C and E12-F057C RPV Fill Connection isolation valves.

Standard: E12-F056C and E12-F057C are open.

Comments: **Cue the candidate E12-F056C and E12-F057C are open.**

SAT _____ **UNSAT** _____

FOR LPCS path # 3

Item 7 (*) Locate fire hose station 14B in area 9 119 ft outside the switchgear room.

Standard: Locates fire hose station 14B on 119 ft elevation.

Comments: Do not let the candidate remove the hose from the reel or remove the nozzle from the hose.

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 8 (*) Locate E21-F013 and E21-F014, RPV Fill Connection.

Standard: Locates E21-F013 and E21-F014 RPV Fill Connection in the Piping Penetration Room in area 9/10 119 ft.

Comments: Valves are located in the far left corner of the room in the overhead between E21-F005 and the wall.

SAT _____ **UNSAT** _____

Item 9 (*) Connects the fire hose to E21-F013 and E21-F014.

Standard: Hose is connected to E21-F013 and E21-F014.

Comments: **CUE the candidate the fire hose is connected to E21-F013 and E21-F014.**

SAT _____ **UNSAT** _____

ITEM 11 MAY BE DONE BEFORE ITEM 10 SEQUENCE IS NOT CRITICAL.

Item 10 (*) Locate P64-FA13B fire hose isolation valve and opens the valve.

Standard: Locates P64-FA13B and opens the valve.

Comments: Cue the candidate the resistance is found on the valve in the counter clockwise direction. P64-FA13B is the hose station isolation valve.

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

Item 11 (*) Open E21-F013 and E21-F014 RPV Fill Connection isolation valves.

Standard: E21-F013 and E21-F014 are open.

Comments: Cue the candidate E21-F013 and E21-F014 are open.

SAT _____ **UNSAT** _____

TERMINATING CUE(s)

The candidate reports to the SRO with the Command Function that Attachment 26 is connected for RHR 'C' and LPCS.

STOP TIME: _____

OVERALL COMMENTS:

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: ALIGN FIRE WATER FOR INJECTION TO THE REACTOR VIA LPCS AND RHR 'C' PER EP-2 ATTACHMENT 26

JPM No. GJPM-NLO-EP026 Rev. 01 Page 11 of 12

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating

Expected Response Time

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

A LOCA has occurred. The reactor is shutdown with RPV level still lowering. The SRO with the Command Function is implementing EP-2 actions.

Initiating Cue(s):

The SRO with the Command Function has directed you to obtain EP-2 Attachment 26 Injection into RPV with Fire Protection Water System. Align LPCS and RHR 'C' for injection with Fire Water. Plant Services is dispatching a ladder and extra fire hoses to the area. Steps 2.1 through 2.3.2 are complete of Attachment 26.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-NLO-P6402
Revision: 00
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Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

MANUAL START OF DIESEL DRIVEN FIRE PUMP (FAULTED FAILURE OF FIRST MANUAL POSITION)

REASON FOR REVISION: MODIFIED JPM from NRC exam 8/2002 for NRC 2/2004.

THIS DOCUMENT REPLACES N/A.

REVIEW / APPROVAL:

PREPARED BY: _____DATE:_____

REVIEWED BY: _____DATE:_____

APPROVED BY: _____DATE:_____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: MANUAL START OF DIESEL DRIVEN FIRE PUMP (FAULTED)

JPM No. GJPM-NLO-P6402 Rev. 02 Page 2 of 12

Task List No: AON-P64-004

K/A Reference and Importance Factors (RO/SRO):

K/A 286000 A2.05 – 3.1/3.3; A3.01 – 3.4/3.4; A4.06 – 3.4/3.4
2.1.30 – 3.9/3.4

SAFETY FUNCTION – 8
RO Group 2
SRO Group 2
10 CFR 55.45(a) 6

Time Required for Completion: 26 Minutes (approximate).

Time Critical: YES/***NO***

Faulted JPM: ***YES***/NO

PLANT EMERGENCY/ABNORMAL

APPLICABLE METHOD OF TESTING

Performance: Simulate X Actual _____

Setting: Classroom _____ Plant X Simulator _____

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

DISCUSSION

This JPM will evaluate the candidate's ability to perform a manual Diesel Driven Fire Pump at the Fire Water Pump House. This is an abnormal condition that would require operator action in the event of a fire on site and a failure of the Diesel Driven Fire Pump to automatically start.

The proper method of evaluation is by simulation in the plant at the Fire Water Pump House.

This JPM is written to be performed on Diesel Driven Fire Pump 'A', however, the evaluator may use Diesel Driven Fire Pump 'B' depending upon plant conditions and Shift Manager.

If requested, the evaluator should supply the candidate with a controlled copy of SOI 04-S-01-P64-1.

Required Material(s):

01 SOI 04-S-01-P64-1, Fire Protection Water System

General Reference(s):

01 SOI 04-S-01-P64-1, Fire Protection Water System

Safety Consideration(s):

01 Candidate should **NOT** manipulate any switches or valves on the Diesel Driven Fire Water Pumps.

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ standard to candidate.)

Diesel Driven Fire Pump 'A' is operating on the Fire Water System.

Initial Condition(s): (The location for the initial conditions to be given is the Control Room, Security Island or Control Building entrance.)

The plant is at 100% power. Diesel Driven Fire Pump 'B' is tagged out for bearing replacement. The Motor Driven Fire Pump tripped on start and cannot be started. There is a fire in the Unit 1 Turbine Building. The Control Room has attempted to start the Motor Driven and Diesel Driven Fire Pump 'A' and neither has started.

Initiating Cue(s):

The Control Room has directed you to manually start Diesel Driven Fire Pump 'A'.

Start Time: _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 ( ) Obtain a controlled copy of SOI 04-S-01-P64-1.

Standard: Candidate obtains a controlled copy of SOI 04-S-01-P64-1.

Comments: **Once candidate requests procedure, evaluator may provide a copy of the procedure.**

SAT _____ **UNSAT** _____

Item 2 (*) Locate Diesel Driven Fire Pump 'A'.

Standard: Candidate locates Diesel Driven Fire Pump 'A'.

Comments: Diesel Driven Fire Pump 'A' is located in the Fire Water Pump House in the yard area near the Unit 1 Warehouse.

SAT _____ **UNSAT** _____

Item 3 ( ) Locate panel SH22-P135 for Diesel Driven Fire Pump 'A'.

Standard: Candidate locates panel SH22-P135 for Diesel Driven Fire Pump 'A'.

Comments:

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

EVALUATOR NOTE: Whichever MANUAL position is used first the pump fails to start, when the second MANUAL position is used the pump will start or the non control cabinet manual start.

Item 4 ( ) On panel SH22-P135, place control switch to MANUAL 1.

Standard: Candidate states that he would place the local control switch for Diesel Driven Fire Pump to MANUAL 1.

Comments: **Cue the candidate that the Control switch is in the position identified by the candidate.**

NOTE: Candidate may elect to perform Item 6 instead of this item, this is acceptable. Candidate would have to perform at least Item 4&5 or Item 6&7.

SAT _____ **UNSAT** _____

Item 5 ( ) Depress the local START pushbutton on SH22-P135.

Standard: Candidate states he would depress the local START pushbutton on SH22-P135.

Comments: **CUE the candidate the DISEL FIRE PUMP DOES NOT attempt to start (PUMP/DIESEL is as is).**

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

SEE EVALUATOR NOTE AT ITEM 4.

Item 6 ( ) On panel SH22-P135, place control switch to MANUAL 2.

Standard: Candidate states that he would place the local control switch for Diesel Driven Fire Pump to MANUAL 2.

Comments: **Cue the candidate that the Control switch is in the position identified by the candidate.**

NOTE: Candidate may perform this item or go on to manual start.

SAT _____ **UNSAT** _____

Item 7 ( ) Depress the local START pushbutton on SH22-P135.

Standard: Candidate states he would depress the local START pushbutton on SH22-P135.

Comments: **CUE the candidate the DISEL FIRE PUMP starts and comes up to rated discharge pressure.**

Evaluator Note: Go to Item 11.

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 8 (*) Turn Manual Override knob on Fuel Control Valve to the fully clockwise position.

Standard: Candidate locates the Fuel Control Valve and states he would turn the Manual Override Knob fully clockwise.

Comments: **Cue the candidate that the Manual Override Knob MOTION HAS STOPPED.**

IF THE CANDIDATE BYPASSED THE SECOND MANUAL POSITION THE FOLLOWING ITEMS BECOME CRITICAL, OTHERWISE THESE ITEMS WILL BE N/A.

SAT _____ **UNSAT** _____

Item 9 ( ) Select a starter contactor and lift and hold contactor handle to crank diesel.

Standard: Candidate states he would lift and hold contactor handle to crank diesel.

Comments: **Cue the candidate the DISEL FIRE PUMP DOES NOT do anything (PUMP/DIESEL is as is).**

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 10 (*) ON BOTH starter contactors, lifts and holds both contactor handles to crank diesel. Release the handles when diesel starts.

Standard: Candidate states he would lift and hold both contactor handles to crank diesel. Release the handles when diesel starts.

Comments: **Cue the candidate the DISEL FIRE PUMP STARTS.**

Note: Not Critical if candidate started fire pump with second Manual Bypass switch position.

SAT _____ **UNSAT** _____

Item 11 (*) After Diesel Driven Fire Pump starts, throttle open P64-F323A, the Cooling Water Solenoid Bypass valve to maintain ≈ 5 – 10 psig cooling water to diesel.

Standard: Candidate states he would throttle open P64-F323A, the Cooling Water Solenoid Bypass valve to maintain ≈ 5 – 10 psig cooling water to diesel

Comments: Cue the candidate that cooling water pressure indicates 7 psig.

Note: Not Critical if candidate started fire pump with second Manual Bypass switch position.

SAT _____ **UNSAT** _____

TERMINATING CUE(s):

Diesel Driven Fire Pump is operating supplying the Fire Water System.

STOP TIME: _____

OVERALL COMMENTS:

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating

Expected Response Time

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

The plant is at 100% power. Diesel Driven Fire Pump 'B' is tagged out for bearing replacement. The Motor Driven Fire Pump tripped on start and cannot be started. There is a fire in the Unit 1 Turbine Building. The Control Room has attempted to start the Motor Driven and Diesel Driven Fire Pump 'A' and neither has started.

Initiating Cue(s):

The Control Room Supervisor has directed you to manually start Diesel Driven Fire Pump 'A'.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-RO-B3311
Revision: 00
Page: 1 of 11
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

RECOVER FROM RECIRC FLOW CONTROL VALVE RUNBACK

_____**X**_____ MINOR _____ MAJOR

REASON FOR REVISION: Update JPM from BANK for NRC 2/2004.

THIS DOCUMENT REPLACES GG-1-JPM-RO-B3311.00 .

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____
Reviewer

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Recover from Recirc Flow Control Valve Runback

JPM No. GJPM-RO-B3311 Rev. 00 Page 2 of 11

Task List No: CRO-B33(2)-008

K/A Reference and Importance Factors (RO/SRO):

K/A 202002 A2.08 – 3.3/3.3; A1.08 – 3.4/3.4; 2.1.30 – 3.9/3.4

SAFETY FUNCTION: 1
RO Group 1
SRO Group 1
10CFR 55.45(a) (6 & 8)

Time Required for Completion: 15 Minutes (approximate).

Time Critical: YES/***NO***

Faulted: YES/***NO***

Simulator

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom _____ Plant _____ Simulator X

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

DISCUSSION

This JPM will evaluate the candidate's ability to recover the Recirculation System Flow Control Valve (FCV) operation following an automatic Runback Signal. This JPM should be performed in the simulator.

Set up the simulator as follows:

Initialize the simulator to IC-17.
Trip Reactor Feed Pump B.
Allow the Reactor Recirculation System to Runback the Recirc Flow Control Valves (Adjust FCVs to 40%).
Insert the first gang of control rods to reduce reactor power to within the capabilities of one Reactor Feed Pump.
Reset the vibration monitor for Reactor Feed Pump A.
Allow plant conditions to stabilize.

Place the simulator in FREEZE.

Required Material(s):

01 04-1-01-B33-1 Reactor Recirculation System

General Reference(s):

01 04-1-01-B33-1 Reactor Recirculation System

Safety Consideration(s):

01 None

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ Standard to candidate.)

Reactor Recirculation Flow Control Valves are reset with Total Core Flow at 67 Mlbm/hr.
(60% core flow – 67.5 Mlbm/hr ±2% is the acceptable range)

Initial Condition(s):

The plant has experienced a trip of Reactor Feed Pump B and subsequent Recirc Flow Control Valve Runback.

Initiating Cue(s):

The Control Room Supervisor has directed you to reset the Recirc Flow Control Valve Runback and return Reactor Total Core Flow to 67 Mlbm/hr. Other operators will perform all other tasks.

Start Time: _____

NOTE: **Critical items** denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

Item 1 ( ) Verify Reactor Vessel Water Level is > low level alarm setpoint.

Standard: Candidate verifies Reactor Water level is above the Low Level Alarm Point by indications on H13-P680.

Comments: Candidate may verify one of the following to satisfy Item 1: Reactor Water Level High/Low annunciator (H13-P680 3A-A3) clear; Reactor Water level on Narrow Range Level indicators (H13-P680 section 2B) are indicating > 32 inches.

SAT _____ **UNSAT** _____

NOTE: Candidate may elect to operate Recirc Loop B first this is acceptable.

Item 2 (*) Using Recirc Loop A FLO CONT, lower signal output until one of the following occurs:
____ % Limiter Error is ZERO
____ % Servo Error is ZERO
____ FCV Motion is noticed in the close direction
____ reduction in associated loop flow is noticed

Standard: Candidate lowers Recirc Loop 'A' FLO CONT on H13-P680 section 3D until one of the above is observed.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 3 (*) Press RECIRC PUMP 'A' CAV INTLK RESET pushbutton on H13-0P680 section 3C.

Standard: Candidate depresses RECIRC PUMP 'A' CAV INTLK RESET pushbutton on H13-0P680 section 3C.

Comments:

SAT _____ **UNSAT** _____

Item 4 ( ) Observes RECIRC FCV A PARTIAL CLOSE/RFP TRIP annunciator resets. (H13-P680 3A-D1)

Standard: Candidate observes RECIRC FCV A PARTIAL CLOSE/RFP TRIP annunciator resets.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

NOTE: Candidate may elect to operate Recirc Loop B first this is acceptable.

Item 5 (*) Using Recirc Loop B FLO CONT, lower signal output until one of the following occurs:
____ % Limiter Error is ZERO
____ % Servo Error is ZERO
____ FCV Motion is noticed in the close direction
____ reduction in associated loop flow is noticed

Standard: Candidate lowers Recirc Loop 'B' FLO CONT on H13-P680 section 3D until one of the above is observed.

Comments:

SAT _____ **UNSAT** _____

Item 6 (*) Press RECIRC PUMP 'B' CAV INTLK RESET pushbutton on H13-0P680 section 3C.

Standard: Candidate depresses RECIRC PUMP 'B' CAV INTLK RESET pushbutton on H13-0P680 section 3C.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 7 ( ) Observes RECIRC FCV B PARTIAL CLOSE/RFP TRIP annunciator resets. (H13-P680 4A1-C4)

Standard: Candidate observes RECIRC FCV B PARTIAL CLOSE/RFP TRIP annunciator resets.

Comments:

SAT _____ **UNSAT** _____

Item 8 (*) Adjust Reactor Recirc Flow Control Valves to obtain Total Core Flow of 67 Mlbm/hr.

Standard: Candidate adjusts Reactor Recirc Flow Control Valves as necessary to obtain Total Core Flow of 67 Mlbm/hr.

Comments: **Acceptable range is 60% core flow ±2% (67.5 Mlbm/hr)**

SAT _____ **UNSAT** _____

TERMINATING CUE(s)

Reactor Recirc Flow Control Valve Runback is reset and Total Core Flow is 67 Mlbm/hr.

STOP TIME: _____

OVERALL COMMENTS:

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating _____

Expected Response Time _____

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

The plant has experienced a trip of Reactor Feed Pump B and subsequent Recirc Flow Control Valve Runback.

Initiating Cue(s):

The Control Room Supervisor has directed you to reset the Recirc Flow Control Valve Runback and return Reactor Total Core Flow to 67 Mlbm/hr. Other operators will perform all other tasks.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-RO-C6106
Revision: 00
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Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

STARTUP RCIC FROM THE REMOTE SHUTDOWN PANEL TO CONTROL RPV WATER LEVEL ALTERNATE PATH FAILED FLOW CONTROLLER

_____**X**_____ MINOR _____ MAJOR

REASON FOR REVISION: New JPM.

THIS DOCUMENT REPLACES N/A

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____
Reviewer

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Startup RCIC from the Remote Shutdown Panel to control RPV Water Level

JPM No. GJPM-RO-C6106 Rev. 00 Page 2 of 13

Task List No: CRO-C61-005

K/A Reference and Importance Factors (RO/SRO):

K/A 295016 AA1.06 – 4.0/4.1; AK2.01 – 4.4/4.5; AK3.03 – 3.5/3.7; AA1.07 – 4.2/4.3; AA2.02 – 4.2/4.3 2.1.30 – 3.9/3.4

SAFETY FUNCTION: 2 & 7
RO Group 1
SRO Group 1
10CFR 55.45(a) (4; 6 & 8)

Time Required for Completion: 20 Minutes (approximate).

Time Critical: YES/***NO***

Faulted: ***YES***/NO

Plant

APPLICABLE METHOD OF TESTING

Performance: Simulate X Actual _____

Setting: Classroom _____ Plant X Simulator _____

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

DISCUSSION

This JPM will evaluate the candidate's ability to startup and operate RCIC from the Remote Shutdown Panel. This JPM should be simulated in the plant. This JPM may be performed in the Simulator.

If the Simulator is to be used, set up the simulator as follows:

Initialize the simulator to any rated conditions IC.

Insert override **ai_1c61r100 @ 100** P150 1C61-FK-R100 RCIC Turbine Flow Control

Place the simulator in FREEZE.

Required Material(s):

01 04-1-01-E51-1 Reactor Core Isolation Cooling System

02 05-1-02-II-1 Shutdown From Remote Shutdown Panel

General Reference(s):

01 04-1-01-E51-1 Reactor Core Isolation Cooling System

02 05-1-02-II-1 Shutdown From Remote Shutdown Panel

Safety Consideration(s):

01 **DO NOT OPERATE CONTROLS IN THE PLANT.**

Task Title: Startup RCIC from the Remote Shutdown Panel to control RPV Water Level

---

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ Standard to candidate.)

RCIC is being operated at 800 gpm from the Remote Shutdown Panel with the flow controller in MANUAL.

Initial Condition(s):

Plant conditions have warranted abandoning the Main Control Room. Operators are stationed at the Remote Shutdown Panels. Upon leaving the Main Control Room RCIC was NOT initiated. Standby Service Water System 'A' is operating.

Initiating Cue(s):

The Control Room Supervisor has directed you to startup RCIC using a combination of the ONEP and E51 SOI and inject to the reactor at 800 gpm. Other operators will perform all other tasks.

Start Time: _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 ( ) Obtain a controlled copy of 04-1-01-E51-1 and 05-1-02-II-1.

Standard: Candidate obtains a controlled copy of SOI 04-1-01-E51-1 Reactor Core Isolation Cooling System and 05-1-02-II-1 Shutdown from Remote Shutdown Panels ONEP.

Comments: Provide copy to candidate when he requests/ states where to obtain.

SAT _____ **UNSAT** _____

Item 2 (*) Locate the Remote Shutdown Panels H22-P150 in area 25A 111 ft elevation.

Standard: Candidate locates the Remote Shutdown Panels.

Comments:

SAT _____ **UNSAT** _____

Item 3 ( ) Ensure RCIC Turbine Flow Control in Auto set to 800 GPM.

Standard: Candidate ensures RCIC Turbine Flow Control in Auto set to 800 GPM.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 4 (*) Transfer RCIC control to Remote Shutdown Panel by placing TURB FLO CONT XFER switch to EMER position.

Standard: Candidate transfers RCIC control to Remote Shutdown Panel by placing TURB FLO CONT XFER switch to EMER position on H22-P150.

Comments: **CUE the candidate TURB FLO CONT XFER switch is in EMER.**

SAT _____ **UNSAT** _____

Item 5 (*) Shift RCIC FLO CONT to MANUAL.

Standard: Candidate shifts RCIC FLO CONT to MANUAL on H22-P150.

Comments: **Cue the candidate RCIC FLO CONT is in MANUAL.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 6 (*) Reduce RCIC FLO CONT to minimum.

Standard: Candidate reduces RCIC FLO CONT to minimum using CLOSE pushbutton.

Comments: **CUE the candidate RCIC FLO CONT indicates 0%.**

SAT _____ **UNSAT** _____

Item 7 (*) Open E51-F046, RCIC WTR TO TURB LUBE OIL CLR.

Standard: Candidate opens E51-F046, RCIC WTR TO TURB LUBE OIL CLR.

Comments: **CUE the candidate E51-F046 red light is illuminated.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 8 ( ) Start Turbine Gland Seal Compressor.

Standard: Candidate starts Turbine Gland Seal Compressor.

Comments: **CUE the candidate the Turbine Gland Seal Compressor is operating.**

SAT _____ **UNSAT** _____

Item 9 (*) Open E51-F095/ F045 RCIC STM SPLY BYP and RCIC STM SPLY TO RCIC TURB using the combined handswitch.

Standard: Candidate opens E51-F095/ F045 RCIC STM SPLY BYP and RCIC STM SPLY TO RCIC TURB using the combined handswitch.

Comments: **CUE the candidate the E51-F095 opens followed by E51-F045 with RCIC speed indicating on scale.**

When E51-F045 is full open, E51-F095 will automatically close.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 10 (*) Raise turbine speed to develop > 2000 rpm using the RCIC FLO CONT in MANUAL.

Standard: Candidate raises turbine speed to develop > 2000 rpm using the RCIC FLO CONT in MANUAL.

Comments: **CUE the candidate RCIC speed indicates 2500 rpm.**

SAT _____ **UNSAT** _____

Item 11 (*) Open E51-F013 RCIC INJ SHUTOFF VLV.

Standard: Candidate opens E51-F013 RCIC INJ SHUTOFF VLV.

Comments: **Cue the candidate E51-F013 has the red light illuminated.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

EVALUATOR NOTE:

The candidate may decide to null the controller to shift to automatic and use the thumbwheel. When this occurs, CUE the candidate the Controller is Nulled (red needle in the green band). When the candidate shifts the controller to automatic and attempts to control flow, CUE the candidate there is NO response from RCIC. FLOW AND SPEED ARE NOT RESPONDING TO THE CONTROLLER IN AUTOMATIC. If the candidate returns the controller to MANUAL and adjusts RCIC, CUE the candidate that RCIC is responding to the commands.

CUE:
As the candidate raises RCIC speed in MANUAL, CUE the candidate RCIC Speed and Flow have risen on indications to 3400 rpm and 800 gpm (red needle on controller) on the flow controller.

Item 12 (*) Raise RCIC flow to 800 gpm using RCIC FLO CONT.

Standard: Candidate may use the controller in manual or automatic to raise RCIC flow to 800 gpm.

Comments: **SEE CUE ABOVE for control indications. If asked, CUE candidate as Control Room Supervisor to use the means necessary to obtain 800 gpm flow to the RPV.**

SAT _____ **UNSAT** _____

TERMINATING CUE(s)

RCIC is being operated at 800 gpm from the Remote Shutdown Panel with the flow controller in MANUAL.

STOP TIME: _____

OVERALL COMMENTS:

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating _____

Expected Response Time _____

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

Plant conditions have warranted abandoning the Main Control Room. Operators are stationed at the Remote Shutdown Panels. Upon leaving the Main Control Room RCIC was NOT initiated. Standby Service Water System 'A' is operating.

Initiating Cue(s):

The Control Room Supervisor has directed you to startup RCIC using a combination of the ONEP and E51 SOI and inject to the reactor at 800 gpm. Other operators will perform all other tasks.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-RO-E2205
Revision: 00
Page: 1 of 11
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

RAISE SUPPRESSION POOL LEVEL WITH HPCS

_____**X**_____ MINOR _____ MAJOR

REASON FOR REVISION: Update JPM from bank for NRC 2/2004.

THIS DOCUMENT REPLACES N/A .

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____
Reviewer

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/ INITIAL)	FINAL ACCEPTANCE BY DC (DATE/ INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Raise Suppression Pool Water Level using HPCS

JPM No. GJPM-RO-E2205 Rev. 00 Page 2 of 11

Task List No: CRO-E22-011; CRO-P41-005

K/A Reference and Importance Factors (RO/SRO):

K/A 223001 A2.11 – 3.6/3.8; A1.08 – 3.5/3.6
209002 A4.01 – 3.7/3.7; A4.04 – 3.1/3.1; A4.09 – 3.4/3.5

SAFETY FUNCTION: 5
RO Group 1
SRO Group 1
10CFR 55.45(a) (8)

Time Required for Completion: 20 Minutes (approximate).

Time Critical: YES/***NO***

Faulted: YES/***NO***

Simulator

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom _____ Plant _____ Simulator X

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

Task Title: Raise Suppression Pool Water Level using HPCS

DISCUSSION

This JPM will evaluate the candidate's ability to raise Suppression Pool Water Level using High Pressure Core Spray (HPCS) as required by the Emergency Procedures. This JPM should be performed in the simulator.

Set up the simulator as follows:

Initialize the simulator to a Power IC.
Lower Suppression Pool Water level to obtain low level annunciators.

Required Material(s):

01 04-1-01-E22-1 High Pressure Core Spray System

General Reference(s):

01 04-1-01-E22-1 High Pressure Core Spray System

Safety Consideration(s):

01 None

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Raise Suppression Pool Water Level using HPCS

JPM No. GJPM-RO-E2205 Rev. 00 Page 4 of 11

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ Standard to candidate.)

Suppression Pool Water Level Low annunciators are clear following raising water level using the HPCS Pump.

Initial Condition(s):

Suppression Pool Water level is low. Emergency Procedure 3 has been entered on Suppression Pool Level. HPCS and HPCS SSW are in standby.

Initiating Cue(s):

The Control Room Supervisor has directed you to raise Suppression Pool Water level by operating the HPCS Pump to transfer water from the Condensate Storage Tank to the Suppression Pool per the SOI to clear the Suppression Pool Level alarms. Perform a manual startup of HPCS Standby Service Water to support HPCS operation. Use a controlled startup of the HPCS Pump.

Start Time: _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

This may be performed at any point prior to starting the HPCS Pump.

Item 1 ( ) Obtain a controlled copy of SOI 04-1-01-P41-1 Standby Service Water System.

Standard: Candidate obtains the SOI for HPCS SSW (SSW 'C').

Comments:

SAT _____ **UNSAT** _____

Note SSW 'C' MOV Test Switch NOT required for this situation since EP-3 is in affect.

Item 2 (*) Start HPCS SVC WTR PMP.

Standard: Candidate starts HPCS SVC WTR PMP on H13-P870.

Comments:

SAT _____ **UNSAT** _____

Item 3 (*) Open SSW LOOP C RTN TO CLG TWR A valve P41-F011.

Standard: Candidate opens P41-F011 on H13-P870.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 4 ( ) Check that SSW LOOP C FLO is about 960 gpm and PRESS indicates about 80 psig.

Standard: Candidate checks SSW LOOP C flow is about 960 gpm and pressure indicates about 80 psig on H13-P870.

Comments:

SAT _____ **UNSAT** _____

Item 5 ( ) Obtain a controlled copy of SOI 04-1-01-E22-1 High Pressure Core Spray System.

Standard: Candidate obtains the SOI for HPCS.

Comments:

SAT _____ **UNSAT** _____

Note HPCS MOV Test Switch NOT required for this situation since EP-3 is in affect.

Item 6 ( ) Closed E22-F305, E22-F004 Pressure Lock valve.

Standard: Candidate directs the Auxiliary Building Operator to closed E22-F305.

Comments: **CUE the Auxiliary Building Operator reports E22-F305 is closed.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 7 (*) Start HPCS Pump using the HPCS Pump handswitch on H13-P601.

Standard: HPCS pump is started from H13-P601.

Comments: Section 5.2 for manually starting HPCS Pump.

SAT _____ **UNSAT** _____

Item 8 ( ) Check the following:

____ HPCS Pump starts (red light ON)
____ HPCS Pump motor current is < 434 amps on II-R616, HPCS motor amps.
____ E22-F012, HPCS MIN FLO to SUPP POOL opens as discharge pressure indicated on PI-R601, HPCS PMP DISCH PRESS rises above 130 psig.
____ HPCS Service Water Pump is running at a discharge pressure of 80 psig and a flow of 880 gpm as indicated on P41-PI-R602 SSW Loop C Press and P41-FI-R601 SSW Loop C Flo on H13-P870-5B.
____ P41-F011, SSW LOOP C RTN to CLG TWR A, is open (H13-P870-5C)
____ HPCS Room Cooler Fan has started (red light ON above HPCS PMP RM CLR, T51-B001, H13-P870-5C)

Standard: Candidate observes the above indications.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 9 ( ) Reports the Low Suppression Pool Level is rising and annunciators are clear.

Standard: Candidate reports the Suppression Pool Level annunciators are clear. (H13-P870-4A/10A-C3)

Comments: **CUE the candidate another operator will secure HPCS.**

SAT _____ **UNSAT** _____

TERMINATING CUE(s)

Suppression Pool Water Level has been raised using HPCS pump.

STOP TIME: _____

OVERALL COMMENTS:

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating _____

Expected Response Time _____

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

Suppression Pool Water level is low. Emergency Procedure 3 has been entered on Suppression Pool Level. HPCS and HPCS SSW are in standby.

Initiating Cue(s):

The Control Room Supervisor has directed you to raise Suppression Pool Water level by operating the HPCS Pump to transfer water from the Condensate Storage Tank to the Suppression Pool per the SOI to clear the Suppression Pool Level alarms. Perform a manual startup of HPCS Standby Service Water to support HPCS operation. Use a controlled startup of the HPCS Pump.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-RO-E2222
Revision: 01
Page: 1 of 10
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

MANUALLY INITIATE ADS
ALTERNATE PATH
NO PUMP PERMISSIVES

_____**X**_____ MINOR _____ MAJOR

REASON FOR REVISION: Update JPM from NRC 3/1998 exam for NRC 2/2004.

THIS DOCUMENT REPLACES GG-1-JPM-RO-E2222.00 .

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____
Reviewer

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Manually Initiate ADS

JPM No. GJPM-RO-E2222 Rev. 01 Page 2 of 10

Task List No: CRO-E22(1)-002

K/A Reference and Importance Factors (RO/SRO):

K/A 218000 A2.04 – 4.1/4.2; A4.01 – 4.4/4.4; A4.02 – 4.2/4.2

SAFETY FUNCTION: 3
RO Group 1
SRO Group 1
10CFR 55.45(a) (8)

Time Required for Completion: 5 Minutes (approximate).

Time Critical: YES/***NO***

Faulted: ***YES***/NO

Simulator

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom _____ Plant _____ Simulator X

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

Task Title: Manually Initiate ADS

DISCUSSION

This JPM will evaluate the candidate's ability to manually initiate the Automatic Depressurization System (ADS) as required by the Emergency Procedures. This JPM should be performed in the simulator.

Set up the simulator as follows:

Initialize the simulator to a Power IC.
Place the ADS MANUAL INHIBIT A/B handswitches in INHIBIT.
Insert the following overrides:

- **p601_19a_e_2** ADS B RHR B/RHR C PERM to **OFF**(2)
- **p601_18a_e_2** ADS A LPCS/RHR A PERM to **OFF**(2)
- **di_1b21m629ed** P601/19B ADS Logic E MAN Init DEPRS to **NORM**
- **di_1b21m629fd** P601/19B ADS Logic F MAN Init DEPRS to **NORM**
- **di_1b21m605d** P601/19C MSL D SRV (ADS) B21-F041D to **AUTO**

Insert Malfunction **rr063a @ 2%** Recirc Line break

Allow the simulator to pickup high drywell pressure signals and place the simulator in FREEZE.

Required Material(s):

01 04-1-01-B21-1 Nuclear Boiler System

General Reference(s):

01 04-1-01-B21-1 Nuclear Boiler System

Safety Consideration(s):

01 None

Task Title: Manually Initiate ADS

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ Standard to candidate.)

Opening 8 ADS/SRVs in an emergency situation. (Accomplished using the SRV handswitches.) B21-F041D will fail to open with the handswitch requiring a NON-ADS valve to be opened.

Initial Condition(s):

The plant has experienced a LOCA on the Feedwater System and the Emergency Procedures are being implemented. Division 1 and 2 Low Pressure ECCS systems have Auto initiated. HPCS and RCIC are out of service.

Initiating Cue(s):

The Control Room Supervisor has determined that it is necessary to perform an emergency depressurization of the reactor vessel. He has directed you to manually initiate the Automatic Depressurization System (ADS) to open 8 SRVs. Other operators will perform all other tasks.

Start Time: _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 ( ) Verify at least one Low Pressure ECCS Pump is running.

Standard: Candidate verifies red indicating light energized for any one of the following pumps: E21-C001 (LPCS pump) or E12-C002A (RHR A pump) or E12-C002B (RHR B pump) or E12-C002C (RHR C pump). (H13-P601)

Comments: Candidate may verify one of the following to satisfy Item 1: ADS A LPCS/RHR A PERM (P601-18A-E2) or ADS B RHR B/RHR C PERM (P601-19A-E2) annunciators OR discharge pressure indication of approximately 350 psig on RHR A or RHR B HX PRESS indicators 1E12-PI-R606A-1 (RHR A) and 1E12-PI-R606B-1 (RHR B). (H13-P601)

Candidate may notice the absence of the ADS permissive annunciators and go straight to opening SRVs with the handswitches bypassing Items 2 & 3. THIS IS ACCEPTABLE.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 2 ( ) Arm and depress the ADS LOGIC A and E MAN INIT pushbuttons on 1H13-P601.

Standard: ADS LOGIC A and E MAN INIT pushbuttons are armed and depressed.

Comments: Completion of JPM Item 2 will not result in satisfactory completion of this task; therefore, this task is not critical. Some candidates may go directly to the SRV handswitches for the ADS valves on H13-P601. This is acceptable.
If asked for guidance from shift supervision, CUE the candidate that the SRO wants eight ADS SRVs opened.

SAT _____ **UNSAT** _____

Item 3 ( ) Arm and depress the ADS LOGIC B and F MAN INIT pushbuttons on 1H13-P601.

Standard: ADS LOGIC B and F MAN INIT pushbuttons are armed and depressed.

Comments: Completion of JPM Item 2 will not result in satisfactory completion of this task; therefore, this task is not critical. Some candidates may go directly to the SRV handswitches for the ADS valves on H13-P601. This is acceptable.
If asked for guidance from shift supervision, CUE the candidate that the SRO wants eight ADS SRVs opened.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 4 (*) Place the keylocked handswitches for eight ADS/SRVs in the OPEN position.

Standard: Keylocked handswitches for at least EIGHT of the 20 SRVs are in the OPEN position with the valves indicating OPEN.

Comments: The candidate should note the failure of B21-F041D to open with the handswitch.
If asked, CUE the candidate that it is desired to have 8 SRVs OPEN.
The candidate should select another SRV and open the valve with its handswitch.

SAT _____ **UNSAT** _____

TERMINATING CUE(s)

Eight SRVs are open with their handswitches.

STOP TIME: _____

OVERALL COMMENTS:

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating _____

Expected Response Time _____

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

The plant has experienced a LOCA on the Feedwater System and the Emergency Procedures are being implemented. Division 1 and 2 Low Pressure ECCS systems have Auto initiated. HPCS and RCIC are out of service.

Initiating Cue(s):

The Control Room Supervisor has determined that it is necessary to perform an emergency depressurization of the reactor vessel. He has directed you to manually initiate the Automatic Depressurization System (ADS) to open 8 SRVs. Other operators will perform all other tasks.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-RO-EP031
Revision: 01
Page: 1 of 16
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

DEFEAT RPS LOGIC TRIPS (EP-2 ATTACHMENT 19)

Minor _____X_____ Major _____

REASON FOR REVISION: updated for NRC exam 2/2004.

THIS DOCUMENT REPLACES GG-1-JPM-RO-EP031.00.

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: DEFEAT RPS LOGIC TRIPS (EP-2 ATT. 19)

JPM No. GJPM-RO-EP031 Rev. 01 Page 2 of 16

Task List No: CRO-EP-019

K/A Reference and Importance Factors (RO/SRO):

K/A 212000 A4.14: 3.8/3.8; A4.17: 4.1/4.1
295037 EK2.01: 4.2/4.3; EK3.07: 4.2/4.3; EA1.01: 4.6/4.6
295015 AA1.02: 4.0/4.2
2.1.20 – 4.3/4.2; 2.1.30 – 3.9/3.4

SAFETY FUNCTION –7
RO Group 1
SRO Group 1
10 CFR 55.45 (a)(8)

Time Required for Completion: 15 Minutes (approximate).

Time Critical: YES/***NO***

Faulted JPM: YES/***NO***

CONTROL ROOM

APPLICABLE METHOD OF TESTING

Performance: Simulate X Actual _____

Setting: Classroom _____ Plant X Simulator _____
(CONTROL ROOM)

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: DEFEAT RPS LOGIC TRIPS (EP-2 ATT. 19)

DISCUSSION

This JPM will evaluate the candidate's ability to defeat RPS Logic trips during an ATWS. This allows the RPS Scram signal to be reset closing the scram inlet and outlet valves and draining the Scram Discharge Volume. This is Attachment 19 of EP-2 RPV Control.

Inform the On-Duty Shift Manager and obtain permission to open the Main Control Room and Upper Control Room Back Panels.

The proper method of evaluation is by simulation in the Main Control Room.

Required Material(s):

01 Emergency Operating Procedure 05-S-01-EP-2, RPV Control Attachment 19, Defeating RPS Logic Trips
02 Flashlight
03 Laser Pointer (optional)

General Reference(s):

01 Emergency Operating Procedure 05-S-01-EP-2, RPV Control Attachment 19, Defeating RPS Logic Trips

Safety Consideration(s):

01 Contact Shift Manager and obtain permission to enter Main Control Room and Upper Control Room back panels.
02 Candidate should not touch any of the relays or terminal boards in the back panels, use the flashlight and laser pointer to denote actions to be taken in the panels.

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: DEFEAT RPS LOGIC TRIPS (EP-2 ATT. 19)

JPM No. GJPM-RO-EP031 Rev. 01 Page 4 of 16

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ standard to candidate.)

RPS logic trips are defeated using Attachment 19 of EP-2.

Initial Condition(s): (The location for the initial conditions to be given is the Control Room.)

The plant is at 30% power in an ATWS condition. The Control Room Supervisor is directing actions per EP-2A.

Initiating Cue(s):

The Control Room Supervisor has directed you to defeat RPS Logic Trips per EP-2 Attachment 19.

Start Time: _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 (*) Locate the Main Control Room Emergency Locker and the Emergency Procedure Jumper Kits.

Standard: Candidate locates the Main Control Room Emergency Locker and the Emergency Procedure Jumper Kits

Comments: (located in the Main Control Room just inside the door coming from the Control Building elevator)

SAT _____ **UNSAT** _____

Item 2 ( ) Obtain a controlled copy of EP-2 Attachment 19.

Standard: Candidate obtains a controlled copy of EP-2 Attachment 19.

Comments: **When the candidate locates the Attachment the evaluator may provide the candidate a copy of the procedure.**

SAT _____ **UNSAT** _____

Item 3 (*) Inspect Jumper Kit for four (4) jumpers.

Standard: Candidate locates jumper kit and verifies there are four (4) jumpers.

Comments: **NOTE: Once the candidate locates the jumpers have the candidate leave the jumpers in the locker.**

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

SEQUENCE OF JUMPER INSTALLATION IS NOT CRITICAL.

Item 4 (*) Locate Main Control Room Panel H13-P692 Bay B.

Standard: Candidate locates Main Control Room Panel H13-P692 Bay B.

Comments:

SAT _____ **UNSAT** _____

Item 5 (*) Locates the affected relays C71-K9B (2nd row of agastat relays from top, 2nd relay from left)

Standard: Candidate locates the affected relay C71-K9B (2nd row of agastat relays from top, 2nd relay from left).

Comments: **Candidate should point out the relay.**

SAT _____ **UNSAT** _____

Item 6 (*) Locates the affected relays C71-K15B (3rd row of agastat relays from top, 3rd relay from left)

Standard: Candidate locates the affected relay C71-K15B (3rd row of agastat relays from top, 3rd relay from left).

Comments: **Candidate should point out the relay.**

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

SEQUENCE OF JUMPER INSTALLATION IS NOT CRITICAL.

Item 7 (*) Install jumper between Terminals T1 on relay C71-K9B and T1 on relay C71-K15B.

Standard: Candidate locates terminals T1 on relay C71-K9B and T1 on relay C71-K15B and indicates the installation of a jumper between the terminals.

Comments: **Candidate should point out the terminals.**

SAT _____ **UNSAT** _____

Item 8 ( ) Initials Alteration Tracking Sheet for Jumper 1 installed.

Standard: Candidate initials Alteration Tracking Sheet for Jumper 1.

Comments:

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

SEQUENCE OF JUMPER INSTALLATION IS NOT CRITICAL.

Item 9 (*) Locate Main Control Room Panel H13-P694 Bay B.

Standard: Candidate locates Main Control Room Panel H13-P694 Bay B.

Comments:

SAT _____ **UNSAT** _____

Item 10 (*) Locates the affected relays C71-K9D (2nd row of agastat relays from top, 2nd relay from left)

Standard: Candidate locates the affected relay C71-K9D (2nd row of agastat relays from top, 2nd relay from left).

Comments: **Candidate should point out the relay.**

SAT _____ **UNSAT** _____

Item 11 (*) Locates the affected relays C71-K15D (3rd row of agastat relays from top, 2nd relay from left)

Standard: Candidate locates the affected relay C71-K15D (3rd row of agastat relays from top, 2nd relay from left).

Comments: **Candidate should point out the relay.**

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

SEQUENCE OF JUMPER INSTALLATION IS NOT CRITICAL.

Item 12 (*) Install jumper between Terminals T1 on relay C71-K9D and T1 on relay C71-K15D.

Standard: Candidate locates terminals T1 on relay C71-K9D and T1 on relay C71-K15D and indicates the installation of a jumper between the terminals.

Comments: **Candidate should point out the terminals.**

SAT _____ **UNSAT** _____

Item 13 ( ) Initials Alteration Tracking Sheet for Jumper 2 installed.

Standard: Candidate initials Alteration Tracking Sheet for Jumper 2.

Comments:

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

SEQUENCE OF JUMPER INSTALLATION IS NOT CRITICAL.

Item 14 (*) Locate Upper Control Room Panel H13-P691 Bay B.

Standard: Candidate locates Upper Control Room Panel H13-P691 Bay B.

Comments:

SAT _____ **UNSAT** _____

Item 15 (*) Locates the affected relays C71-K9A (2nd row of agastat relays from top, 2nd relay from left)

Standard: Candidate locates the affected relay C71-K9A (2nd row of agastat relays from top, 2nd relay from left).

Comments: **Candidate should point out the relay.**

SAT _____ **UNSAT** _____

Item 16 (*) Locates the affected relays C71-K15A (3rd row of agastat relays from top, 3rd relay from left)

Standard: Candidate locates the affected relay C71-K15A (3rd row of agastat relays from top, 3rd relay from left).

Comments: **Candidate should point out the relay.**

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

SEQUENCE OF JUMPER INSTALLATION IS NOT CRITICAL.

Item 17 (*) Install jumper between Terminals T1 on relay C71-K9A and T1 on relay C71-K15A.

Standard: Candidate locates terminals T1 on relay C71-K9A and T1 on relay C71-K15A and indicates the installation of a jumper between the terminals.

Comments: **Candidate should point out the terminals.**

SAT _____ **UNSAT** _____

Item 18 ( ) Initials Alteration Tracking Sheet for Jumper 3 installed.

Standard: Candidate initials Alteration Tracking Sheet for Jumper 3.

Comments:

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

SEQUENCE OF JUMPER INSTALLATION IS NOT CRITICAL.

Item 19 (*) Locate Upper Control Room Panel H13-P693 Bay B.

Standard: Candidate locates Upper Control Room Panel H13-P693 Bay B.

Comments:

SAT _____ **UNSAT** _____

Item 20 (*) Locates the affected relays C71-K9C (2nd row of agastat relays from top, 2nd relay from left)

Standard: Candidate locates the affected relay C71-K9C (2nd row of agastat relays from top, 2nd relay from left).

Comments: **Candidate should point out the relay.**

SAT _____ **UNSAT** _____

Item 21 (*) Locates the affected relays C71-K15C (3rd row of agastat relays from top, 2nd relay from left)

Standard: Candidate locates the affected relay C71-K15C (3rd row of agastat relays from top, 2nd relay from left).

Comments: **Candidate should point out the relay.**

SAT _____ **UNSAT** _____

NOTE: Critical items denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

SEQUENCE OF JUMPER INSTALLATION IS NOT CRITICAL.

Item 22 (*) Install jumper between Terminals T1 on relay C71-K9C and T1 on relay C71-K15C.

Standard: Candidate locates terminals T1 on relay C71-K9C and T1 on relay C71-K15C and indicates the installation of a jumper between the terminals.

Comments: **Candidate should point out the terminals.**

SAT _____ **UNSAT** _____

Item 23 ( ) Initials Alteration Tracking Sheet for Jumper 4 installed.

Standard: Candidate initials Alteration Tracking Sheet for Jumper 4.

Comments:

SAT _____ **UNSAT** _____

TERMINATING CUE(s):

Inform the Control Room Supervisor that EP-2 Attachment 19 has been installed to defeat RPS Logic Trips.

STOP TIME: _____

OVERALL COMMENTS:

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating

Expected Response Time

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

The plant is at 30% power in an ATWS condition. The Control Room Supervisor is directing actions per EP-2A.

Initiating Cue(s):

The Control Room Supervisor has directed you to defeat RPS Logic Trips per EP-2 Attachment 19.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-RO-N2102
Revision: 00
Page: 1 of 15
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

SHIFT FROM LONG CYCLE CLEANUP TO STARTUP LEVEL CONTROL
ALTERNATE PATH
S/U LEVEL CONTROL VALVE FAILURE

REASON FOR REVISION: New JPM.

THIS DOCUMENT REPLACES N/A

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____
Reviewer

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: Shift from Long Cycle Cleanup to Startup Level Control

JPM No. GJPM-RO-N2102 Rev. 00 Page 2 of 15

Task List No: CRO-N21-025 & N19-010

K/A Reference and Importance Factors (RO/SRO):

K/A 259001 A4.04 – 3.1/2.9; A4.01 – 3.6/3.5; A4.05 – 4.0/3.9;
A2.07 – 3.7/3.8; A3.03 – 3.3/3.2; A3.04 – 3.8/3.7
259002 A1.05 – 2.9/2.9; A4.03 – 3.8/3.6 2.1.30 – 3.9/3.4

SAFETY FUNCTION: 2
RO Group 1
SRO Group 1
10CFR 55.45(a) (3; 4; & 8)

Time Required for Completion: 25 Minutes (approximate).

Time Critical: YES/***NO***

Faulted: ***YES***/NO

Simulator
Low Power

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom _____ Plant _____ Simulator X

EVALUATION

Date Performed: _____

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete: _____

Evaluator Signature: _____ Date: _____

DISCUSSION

This JPM will evaluate the candidate's ability to shift the Feedwater and Condensate System from Long Cycle Cleanup to the Startup Level Control Valve then respond to a failure of the Startup level Control Valve open. This JPM should be performed in the simulator.

Set up the simulator as follows:

Initialize the simulator to Startup IC with reactor pressure at 0 psig.
Place Condensate and Feedwater on Long Cycle Cleanup.
Insert malfunction **fw124 @ 100%** Startup Level Control Valve to 100%
Adjust IRMs to Range 10.

Place the simulator in FREEZE.

Required Material(s):

01 03-1-01-1 Cold Shutdown to Generator Carrying Minimum Load

02 05-1-02-V-6 Feedwater Failure Max Demand

General Reference(s):

01 03-1-01-1 Cold Shutdown to Generator Carrying Minimum Load

02 05-1-02-V-6 Feedwater Failure Max Demand

Safety Consideration(s):

01 None

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ Standard to candidate.)

Condensate and Feedwater are aligned to feed the reactor utilizing N21-F040 with the Startup Level Control Valve N21-F513 isolated via N21-F001.

Initial Condition(s):

The plant is in Startup with Reactor pressure at 0 psig. Condensate and Feedwater are in Long Cycle Cleanup. Plant Chemistry has reported Condensate and Feedwater iron content is <50 ppb iron and water chemistry supports feeding the reactor vessel. Feedwater and Condensate are aligned with 'A' Condensate Pump in operation. Main Condenser Hotwell temperature is 95 degrees F.

Initiating Cue(s):

The Control Room Supervisor has directed you to shift the Condensate and Feedwater System from Long Cycle Cleanup to Startup Level Control with Startup Level Control in Automatic at +36 inches per IOI-1 section 6.2.6. Other operators will perform all other tasks.

Start Time: _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 1 ( ) Obtain a controlled copy of IOI-1 03-1-01-1 Cold Shutdown to Generator carrying minimum load.

Standard: Candidate obtains a controlled copy of IOI-1 03-1-01-1 Cold Shutdown to Generator carrying minimum load.

Comments:

SAT _____ **UNSAT** _____

Item 2 ( ) Check Condensate Storage Tank (CST) water level is sufficient to have a 2 foot level drop.

Standard: Candidate observes CST water level on H13-P870 panel and determines level is sufficient to support Startup Level Control operation.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 3 (*) Close N21-F510 FW CU RECIRC VLV by placing its controller to 0% on 1H13-P680 section 1B.

Standard: Candidate closes N21-F510 FW CU RECIRC VLV by placing its controller to 0%.

Comments: **If asked, cue the candidate as Radwaste the Condensate Precoat Filters and Deep Bed Demineralizers are being controlled.**

SAT _____ **UNSAT** _____

Item 4 ( ) Verify N23-F054, HTR DRN PMP COMMON DISCH VLV is closed.

Standard: Candidate contacts the Turbine Building Operator to verify N23-F054, HTR DRN PMP COMMON DISCH VLV is closed.

Comments: **Cue as the Turbine Building Operator, N23-F054, HTR DRN PMP COMMON DISCH VLV is closed.**

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 5 ( ) Open N23-F078, HEATER DRAIN PMPS DISCHARGE HDR MOV using its local handswitch.

Standard: Candidate contacts the Turbine Building Operator to open N23-F078, HEATER DRAIN PMPS DISCHARGE HDR MOV using its local handswitch.

Comments: **Cue as the Turbine Building Operator, N23-F078, HEATER DRAIN PMPS DISCHARGE HDR MOV is open.**

SAT _____ **UNSAT** _____

Item 6 (*) Close N21-F003 FW CLEANUP RECIRC LINE ISOL on 1H13-P870 section 5C.

Standard: Candidate closes N21-F003 FW CLEANUP RECIRC LINE ISOL.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 7 ( ) Open N21-F001, SU FCV OUTL ISOL VLV on H13-P870 section 5C.

Standard: Candidate opens N21-F001, SU FCV OUTL ISOL VLV.

Comments:

SAT _____ **UNSAT** _____

Item 8 (*) Close N21-F040 FW SU BYP VLV on 1H13-P680 section 1C.

Standard: Candidate closes N21-F040 FW SU BYP VLV.

Comments:

SAT _____ **UNSAT** _____

Item 9 ( ) Verify RX WTR LVL SU CONT is in MAN and at 0% output on H13-P680 section 1B.

Standard: Candidate verifies RX WTR LVL SU CONT is in MAN and at 0% output.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 10 (*) Open B21-F065A and B21-F065B, FW INL SHUTOFF VALVES on H13-P680 section 2C.

Standard: Candidate opens B21-F065A and B21-F065B, FW INL SHUTOFF VALVES.

Comments:

SAT _____ **UNSAT** _____

Item 11 ( ) Using the RX WTR LVL SU CONT, C34-R602, maintain reactor water level between 32 – 40 inches by adjusting ⇑ and ⇓ while maintaining the RX WTR LVL HI/LO annunciator clear.

Standard: Candidate adjusts RX WTR LVL SU CONT, C34-R602, to maintain reactor water level between 32 – 40 inches by adjusting ⇑ and ⇓ pushbuttons while maintaining the RX WTR LVL HI/LO annunciator clear.

Comments: Candidate may not have to do anything at this point.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 12 (*) Place C34-R602, RX WTR LVL SU CONT in AUTO.

Standard: Candidate places C34-R602, RX WTR LVL SU CONT in AUTO.

Comments:

SAT _____ **UNSAT** _____

SIMULATOR OPERATOR ACTIVATE TRIGGER 1.

Item 13 (*) Using the RX WTR LVL SU CONT, C34-R602 in AUTO, adjust SET ⇑ and ⇓ pushbuttons slowly to adjust the setpoint to +36 inches while maintaining the RX WTR LVL HI/LO annunciator clear.

Standard: Candidate adjusts RX WTR LVL SU CONT, C34-R602 in AUTO, to adjust the setpoint to +36 inches while maintaining the RX WTR LVL HI/LO annunciator clear.
The malfunction will cause N21-F513 Startup Level Control Valve to fail full open.

Comments: The candidate should announce the failure and take actions to isolate the SU LVL Control valve per ONEP 05-1-02-V-6.

The candidate may attempt to take manual control of N21-F513 and close the valve. This will not function.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 14 (*) Secure operating Condensate Pump.

Standard: Candidate stops the operating Condensate Pump.

Comments: **CUE Stop the evolution until I&C has the opportunity to investigate the failure.**

If this step is performed the JPM stops here and items 15, 16, 17 are deleted and non-critical.

SAT _____ **UNSAT** _____

Item 15 ( ) Shift the Startup level control valve N21-F513 to manual and attempt to close the valve.

Standard: Candidate attempts to take manual control of the Startup level control valve and close the valve.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 16 (*) Close N21-F001, SU FCV OUTL ISOL VLV on H13-P870 section 5C.

Standard: Candidate closes N21-F001, SU FCV OUTL ISOL VLV.

Comments: If Item 14 is performed this item is NOT critical.

SAT _____ **UNSAT** _____

Item 17 (*) Throttles N21-F040 FW SU BYP VLV on 1H13-P680 section 1C to maintain level.

Standard: Candidate throttles N21-F040 FW SU BYP VLV.

Comments: **EVALUATOR NOTE: A follow up question may be needed to verify method of level control for the throttling of N21-F040 since Reactor level will be high.**
If Item 14 is performed this item is NOT critical.

SAT _____ **UNSAT** _____

TERMINATING CUE(s)

Condensate Pumps secured with the lineup in place OR Condensate and Feedwater are aligned to feed the reactor utilizing N21-F040 with the Startup Level Control Valve N21-F513 isolated via N21-F001.

STOP TIME: _____

OVERALL COMMENTS:

ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating _____

Expected Response Time _____

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

The plant is in Startup with Reactor pressure at 0 psig. Condensate and Feedwater are in Long Cycle Cleanup. Plant Chemistry has reported Condensate and Feedwater iron content is <50 ppb iron and water chemistry supports feeding the reactor vessel. Feedwater and Condensate are aligned with 'A' Condensate Pump in operation. Main Condenser Hotwell temperature is 95 degrees F.

Initiating Cue(s):

The Control Room Supervisor has directed you to shift the Condensate and Feedwater System from Long Cycle Cleanup to Startup Level Control with Startup Level Control in Automatic at +36 inches per IOI-1 section 6.2.6. Other operators will perform all other tasks.

ENTERGY

GRAND GULF NUCLEAR STATION

JOB PERFORMANCE MEASURE

Number: GJPM-RO-R2731
Revision: 00
Page: 1 of 17
Rtype:
QA Record
Number of pages _____
Date _____ Initials _____

TRAINING PROGRAM:

OPERATOR TRAINING

TITLE:

DISTRIBUTE LOADS BETWEEN SERVICE TRANSFORMERS 11 AND 21

_____ MINOR _____**X**_____ MAJOR

REASON FOR REVISION: MODIFIED JPM

THIS DOCUMENT REPLACES N/A

REVIEW / APPROVAL:

PREPARED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____
Facility Representative

DATE TRANSMITTED TO DC	INITIAL RECEIPT BY DC (DATE/INITIAL)	RETURNED FOR CORRECTIONS (DATE/INITIAL)	RETURN RECEIPT (DATE/INITIAL)	FINAL ACCEPTANCE BY DC (DATE/INITIALS)

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: DISTRIBUTE LOADS BETWEEN SERVICE TRANSFORMERS 11 & 21

JPM No. GJPM-RO-R2731 Rev. 00 Page 2 of 17

Task List No: CRO-R20/27-003; R20/27-006; R20/27-007

K/A Reference and Importance Factors (RO/SRO):

K/A 262001 A4.01 – 3.4/3.7; A4.02 – 3.4/3.4; A4.04 – 3.6/3.7
A4.05 – 3.3/3.3
2.1.30 – 3.9/3.4; 2.1.31 – 4.2/3.9

SAFTEY FUNCTION – 6
RO GROUP 2
SRO GROUP 1
10CFR55.45(a) 8

Time Required for Completion: 30 Minutes (approximate).

Time Critical: YES/***NO***

Faulted JPM: YES/***NO***

SIMULATOR

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual X

Setting: Classroom _____ Plant _____ Simulator X

EVALUATION

Date Performed:

Performer: _____ SSN: _____ License: RO/SRO

Score: PASS _____ FAIL _____ Time to complete:

Evaluator Signature: _____ Date:

DISCUSSION

This JPM will evaluate the candidate's ability to transfer loads under normal conditions between the two station service transformers.

This JPM should be performed in the simulator. Initialize the simulator to any IC. Cross tie loads on the Service Transformers such that all loads are on Service Transformer 11.

Required Material(s):

01 SOI 04-1-01-R21-11
02 SOI 04-1-01-R21-14
03 SOI 04-1-01-R21-16
04 SOI 04-1-01-R21-17

General Reference(s):

01 SOI 04-1-01-R21-11
02 SOI 04-1-01-R21-14
03 SOI 04-1-01-R21-16
04 SOI 04-1-01-R21-17

Safety Consideration(s):

01 None

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: DISTRIBUTE LOADS BETWEEN SERVICE TRANSFORMERS 11 & 21

JPM No. GJPM-RO-R2731 Rev. 00 Page 4 of 17

READ TO TRAINEE

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. Prior to actually starting the performance of this JPM, I will answer any questions you have. For each step you perform, describe or state what indications you are observing and what indications you expect to see in response to your action. When you have completed the task, inform me.

Task Standard(s): (DO NOT READ standard to candidate.)

Electrical buses 11HD, 14AE, 16AB, and 17AC are supplied from Service Transformer 21.

Initial Condition(s):

Entergy – Mississippi workers have completed work on Service Transformer 21. The Electrical Distribution System is being supplied from Service Transformer 11. Service Transformer 21 has been returned to service and the 34.5 KV Switchyard has been aligned in the preferred lineup.

Initiating Cue(s):

The Control Room Supervisor has directed you to establish a preferred electrical lineup for the electrical distribution system. The Site Power Loop and Bus 28AG will be transferred by the Non-Licensed Operators in the field.

Start Time:

NOTE: **Critical items** denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

BUSES MAY BE TRANSFERRED IN ANY ORDER

The candidate should review the SOIs and establish that 11HD, 14AE, 16AB and 17AC should be transferred to ST-21.

Item 1 ( ) Obtain a controlled copy of SOI 04-1-01-R21-11.

Standard: Candidate obtains a controlled copy of 04-1-01-R21-11 Bus 11HD SOI.

Comments:

SAT _____ **UNSAT** _____

Item 2 ( ) Verify Transformer BOP 12B energized up to bus feeder breaker 252-1108.

Standard: Candidate verifies Transformer BOP 12B energized by observing the following indications on H13-P807:

____ J5206 FDR to XFMR ST-21 closed
____ 552-2105 XFMR ST-21 FDR to Bus 21R closed
____ 2R25-R603 indicates voltage on bus 21R
____ 552-2102 21R FDR to Bus 13R closed
____ 589-2102D disconnect BOP XFMR 12B closed
____ ENEGIZED Status light to 252-1108 is ON.

Comments: **May be checked in any order.**
If asked, cue the candidate breaker 252-1108 has been verified racked in.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 3 (*) Close 252-1108 XFMR 12B FDR to Bus 11HD.

Standard: Candidate closes breaker 252-1108 and observes red light is illuminated.

Comments:

SAT _____ **UNSAT** _____

Item 4 ( ) Observes 252-1101 XFMR 11B FDR to Bus 11HD opens.

Standard: Candidate observes breaker 252-1101 opens by observing green light illuminated.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

BUSES MAY BE TRANSFERRED IN ANY ORDER

Item 5 ( ) Obtain a controlled copy of SOI 04-1-01-R21-14.

Standard: Candidate obtains a controlled copy of 04-1-01-R21-14 Bus 14AE SOI.

Comments:

SAT _____ **UNSAT** _____

Item 6 ( ) Verify Transformer BOP 12A energized up to bus feeder breaker 152-1402.

Standard: Candidate verifies Transformer BOP 12A energized by observing the following indications on H13-P807:

____ J5206 FDR to XFMR ST-21 closed
____ 552-2105 XFMR ST-21 FDR to Bus 21R closed
____ 2R25-R603 indicates voltage on bus 21R
____ 552-2102 21R FDR to Bus 13R closed
____ 589-1102D disconnect BOP XFMR 12A closed
____ ENEGIZED Status light to 152-1402 is ON.

Comments: **May be checked in any order.**
If asked, cue the candidate breaker 152-1402 has been verified racked in.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 7 (*) Close 152-1402 XFMR 12A FDR to Bus 14AE.

Standard: Candidate closes breaker 152-1402 and observes red light is illuminated.

Comments:

SAT _____ **UNSAT** _____

Item 8 ( ) Observes 152-1415 XFMR 11A FDR to Bus 14AE opens.

Standard: Candidate observes breaker 152-1415 opens by observing green light illuminated.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*).** Sequence is assumed unless denoted in the **Comments.**

BUSES MAY BE TRANSFERRED IN ANY ORDER

Item 9 ( ) Obtain a controlled copy of SOI 04-1-01-R21-16.

Standard: Candidate obtains a controlled copy of 04-1-01-R21-16 Bus 16AB SOI.

Comments:

SAT _____ **UNSAT** _____

Item 10 ( ) Verify Transformer ESF 21 energized up to bus feeder breaker 152-1614.

Standard: Candidate verifies Transformer ESF 21 energized by observing the following indications on H13-P807:

____ J5206 FDR to XFMR ST-21 closed
____ 552-2105 XFMR ST-21 FDR to Bus 21R closed
____ 2R25-R603 indicates voltage on bus 21R
____ 552-2104 21R FDR to XFMR ESF 21 closed
____ 152-2901 FDR FRM XFMR ESF 21 closed
____ ENEGIZED Status light to 152-1614 is ON (H13-P864).

Comments: **May be checked in any order.**
If asked, cue the candidate breaker 152-1614 has been verified racked in.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 11 (*) Turn on the Sync Switch for breaker 152-1614 BUS 16AB FDR FRM XFMR ESF 21 source being transferred to.

Standard: Candidate turns on the Sync Switch for breaker 152-1614 and observes the sync scope needle is at 12o'clock ± 10°.

Comments:

SAT _____ **UNSAT** _____

Item 12 (*) Close 152-1614 BUS 16AB FDR FRM XFMR ESF 21.

Standard: Candidate closes breaker 152-1614 and observes red light is illuminated.

Comments:

SAT _____ **UNSAT** _____

Item 13 ( ) Observes 152-1601 BUS 16AB FDR FM ESF XFMR 11 opens.

Standard: Candidate observes breaker 152-1601 opens by observing green light illuminated.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 14 ( ) Turn off the Sync Switch for breaker 152-1614 BUS 16AB FDR FRM XFMR ESF 21.

Standard: Candidate turns of the Sync Switch for breaker 152-1614.

Comments:

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

BUSES MAY BE TRANSFERRED IN ANY ORDER

Item 15 ( ) Obtain a controlled copy of SOI 04-1-01-R21-17.

Standard: Candidate obtains a controlled copy of 04-1-01-R21-17 Bus 17AC SOI.

Comments:

SAT _____ **UNSAT** _____

Item 16 ( ) Verify Transformer ESF 21 energized up to bus feeder breaker 152-1705.

Standard: Candidate verifies Transformer ESF 21 energized by observing the following indications on H13-P807:

____ J5206 FDR to XFMR ST-21 closed
____ 552-2105 XFMR ST-21 FDR to Bus 21R closed
____ 2R25-R603 indicates voltage on bus 21R
____ 552-2104 21R FDR to XFMR ESF 21 closed
____ 152-2902 FDR FRM XFMR ESF 21 closed
____ ENEGIZED Status light to 152-1705 is ON (H13-P601).

Comments: **May be checked in any order.**
If asked, cue the candidate breaker 152-1705 has been verified racked in.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 17 (*) Turn on the Sync Switch for breaker 152-1705 17AC FDR FRM XFMR ESF 21 source being transferred to.

Standard: Candidate turns on the Sync Switch for breaker 152-1705 and observes the sync scope needle is at 12o'clock ± 10°.

Comments:

SAT _____ **UNSAT** _____

Item 18 (*) Close 152-1705 17AC FDR FM ESF 21.

Standard: Candidate closes breaker 152-1705 and observes red light is illuminated.

Comments:

SAT _____ **UNSAT** _____

Item 19 ( ) Observes 152-1706 17AC FDR FM ESF 11 opens.

Standard: Candidate observes breaker 152-1706 opens by observing green light illuminated.

Comments:

Candidate may take the handswitch for Breaker 152-1706 to trip to clear annunciators.

SAT _____ **UNSAT** _____

NOTE: **Critical items** denoted by **(*)**. Sequence is assumed unless denoted in the **Comments**.

Item 20 ( ) Turn off the Sync Switch for breaker 152-1705 17AC FDR FRM XFMR ESF 21.

Standard: Candidate turns off the Sync Switch for breaker 152-1705.

Comments:

SAT _____ **UNSAT** _____

TERMINATING CUE(s)

Electrical buses 11HD, 14AE, 16AB, and 17AC are supplied from Service Transformer 21.

STOP TIME: _____

OVERALL COMMENTS:

GRAND GULF NUCLEAR STATION
JOB PERFORMANCE MEASURE WORKSHEET

Task Title: DISTRIBUTE LOADS BETWEEN SERVICE TRANSFORMERS 11 & 21

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ADDITIONAL QUESTION ASKED AFTER THE PERFORMANCE OF THE JPM TO CLARIFY THE TRAINEE'S ACTION OR UNDERSTANDING OF TASK PERFORMED:

Question _____ K/A _____ Rating

Expected Response Time

Reference(s) Required: Yes / No Reference(s):

Question:

Trainee's Response / Comments:

Correct Response:

THIS PAGE MAY BE GIVEN TO THE TRAINEE

Initial Condition(s):

Entergy – Mississippi workers have completed work on Service Transformer 21. The Electrical Distribution System is being supplied from Service Transformer 11. Service Transformer 21 has been returned to service and the 34.5 KV Switchyard has been aligned in the preferred lineup.

Initiating Cue(s):

The Control Room Supervisor has directed you to establish a preferred electrical lineup for the electrical distribution system. The Site Power Loop and Bus 28AG will be transferred by the Non-Licensed Operators in the field.

Facility: **GRAND GULF NUCLEAR STATION** Scenario No.: **1** Op-Test No.: **Day 1**

Examiners: _____ Operators:_____
_____ _____
_____ _____

Objectives: To evaluate the candidates' ability to operate the facility in response to the following evolutions:

1. Complete a shift of Reactor Recirculation Pumps to Fast Speed.
2. Take actions in response to a Control Rod Drift and complete actions of the CRD Malfunctions ONEP.
3. Respond to a trip of RPS 'A' MG set and the implications of having both RPS buses on Alternate Source of power.
4. Make determination of *multiple* Control Rod Drift*s* following insertion and disarming CRD and taking actions for multiple Control Rod Drifts per CRD Malfunctions ONEP.
5. Take actions per the EOPs in response to an ATWS and mitigate the consequences of the ATWS with no Main Steam Bypass Valves.
6. Take actions for a failure of Standby Liquid Control to inject to the Reactor during an ATWS.

Initial Conditions: Reactor Power is at 34 %.

INOPERABLE Equipment
APRM 'H' is INOP due to a failed power supply card
RHR 'C' Pump is tagged out of service for motor oil replacement
CCW Pump 'B' is tagged out of service for pump seal replacement
RPS 'B' Motor Generator is out of service for EPA circuit breaker replacement, RPS 'B' is on its Alternate Source.
Service Air Compressor 'B' is in service with Service Air Compressor 'A' tagged out of service for oil replacement.
Appropriate clearances and LCOs are written.

Turnover: The plant is operating at 34% power. Reactor Recirculation Pump 'A' has been shifted to Fast speed. Continue operations to shift Reactor Recirculation Pump 'B' to Fast speed at step 5.11.4 of IOI-2. There are scattered thundershowers reported in the Tensas Parish area.

Scenario **1** Day **1** (Continued)

Time Line	Event No.	Malf. No.	Event Type*	Event Description
	1		R (RO) N (SS)	Shift Reactor Recirculation Pump 'B' to fast speed. (SOI 04-1-01-B33-1 section 4.2)
+15	2	z161161_ 56_41	C(RO)	Respond to Control Rod Drift. Perform actions per ONEP 05-1-02-IV-1. Isolate/valve out of service the affected control rod.
+30	3	c71077a		Respond to trip of RPS 'A' Motor Generator trip. Complete Technical Specification/procedural determinations.
+40	4	z161161_ 32_09 *z161161_ 24_33*	C(RO)	Recognize and respond to *multiple* control rod drift*s* and insert a manual Reactor SCRAM per ONEP 05-1-02-IV-1.
	5	c11164 @ 30%	M (ALL)	Upon Reactor Scram recognize the failure of all control rods to fully insert and take actions per EOPs for ATWS.
		tc084a, b, c	C (BOP)	Recognize the failure of Main Steam Bypass Valves to open and control reactor pressure using SRVs within specified band.
				Recognize the loss of both Alternate Divisions of RPS EPAs when Low Pressure ECCS is manually initiated and restore power to RPS to allow insertion of control rods.
		c41263 @ 80%	C (BOP)	Recognize the failure of Standby Liquid Control to meet the parameters to inject into the Reactor when initiated and actions taken for Alternate Boron Injection.

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

Critical Tasks

- Insert manual scram on *multiple* Control Rod Drift*s*.
- Inject Standby Liquid Control prior to Suppression Pool Temperature reaching 110 °F.
- Identify the need for Alternate Standby Liquid Control injection.
- Terminate and prevent injection from Feedwater and ECCS when conditions require entry into Level/Power Control.
- Commence injection into the reactor using Feedwater or RHR 'A' or 'B' through Shutdown Cooling *before* reactor level reaches –192".
- Insert Control Rods in response to ATWS conditions.

Scenario **1** Day **1** (Continued)

Crew Turnover:

Rx at 34% CTP

APRM 'H' is failed due to a failed power supply card and bypassed.

RHR 'C' Pump is tagged out of service for motor oil replacement.
CCW Pump 'B' is tagged out of service for pump seal replacement.
RPS 'B' Motor Generator is out of service for EPA circuit breaker replacement, RPS 'B' is on its Alternate Source.
Service Air Compressor 'B' is in service with Service Air Compressor 'A' tagged out of service for oil replacement.
Appropriate clearances and LCOs are written.

The plant is scheduled to complete shifting Reactor Recirculation to Fast Speed and continue power ascension to full power. Reactor Recirculation Pump 'A' is already in Fast Speed. (04-1-01-B33-1 section 4.2.2.a. (9))

IOI-2 step 5.11.4

Control Rod Withdrawal Sheet step 131b.

Plant EOOS factor is 9.6 GREEN.

There are scattered thunderstorms reported in the Tensas Parish area.

Simulator Setup: (Scenarios may be setup and shot into encrypted ICs and Password protected.)

Start the process from a new simulator load.
Reset to IC-13.

Verify or perform the following:

IC:	13
OOS:	APRM H (Place in Bypass w/ Caution tag) RHR C Pump (Place Red tag on start HS) CCW B Pump (Place Red tag on start HS) RPS B Selector Switch (Place Caution Tag on HS and Caution Tag on RPS A Selector Switch) Service Air Compressor A (Place Red tag on start HS)
Active malfunctions:	**c11164 @ 30%** SDV Block **c41263 @ 80%** SLC injection pipe rupture

Active overrides: None

Pending overrides: None

Pending malfunctions: **z161161_56_41** Control Rod Drift OUT (TRIGGER 1)
c71077a RPS MG A trip (TRIGGER 2)
z161161_32_09 Control Rod Drift OUT (TRIGGER 3)
z161161_24_33 Control Rod Drift OUT (TRIGGER 3)
tc084a, b, c Main Steam Bypass valves stuck CLOSED (TRIGGER 4)

Pending component malfunctions: None

Trigger files:

Trigger 1	Control Rod Drift OUT 56-41
Trigger 2	RPS MG 'A' trip
Trigger 3	Control Rod Drift OUT 32-09 (rod # 2)
Trigger 4	Bypass Valves Fault

COMPONENT	PANEL	INDICATION or CONTROL	SIMULATOR CODE	STATUS	DONE
APRM H		DOWNSCALE	c51010h		
CCW PUMP B	P870-8C	GREEN LIGHT	lo_1p42m603b_g	OFF	
		HANDSWITCH	di_1p42m603b	STOP	
RHR PUMP C	P601-20C		e12642_OUT	OUT	
RPS MOTOR GENERATOR B	P610		c71077b		
Service Air Compressor B	P854		p52041	ON	
Service Air Compressor A	P854		p52040	OFF	
	P854	GRREN LIGHT	lo_1p52m601a_g	OFF	
	P854	HANDSWITCH	di_1p52m601a	STOP	

Bypass Division 2 APRM Bypass Joystick to APRM H position.

Place RHR 'C' OOSVC handswitch to OOSVC

Place CCW pump 'B' handswitch to STOP.

Place RPS 'B' handswitch to ALT.

RESET RPS 'B' half scrams.

Shift Recirc Pump 'A' to Fast Speed.

Set up Recirc Pump 'B' to step 4.2.2.a (9) of 04-1-01-B33-1 SOI.

Startup Unit I Instrument Air Compressor.

Startup all PDS / SPDS screens. Clear any graphs and trends off of SPDS.

Setup the presently used cyclops display and verify it is functional.

Ensure the correct startup sequence is available at the P680 for the present IC.

Install turnover guide, red tag, and LCO paperwork as applicable.

Advance all chart recorders and ensure all pens are inking properly.
(APRM chart recorders must be turned on and settings for scales on pens 0 – 125 scale)

SIMULATOR OPERATION SCENARIO 1

Once simulator is reinitialized and setup complete take the simulator out of Freeze.

Once the Crew has taken control note the simulator time.

Shift Recirc Pump 'B' to fast speed.
Cues:

If asked report as Reactor Engineering, core flow should be raised to 67 Mlbm/hr per the IOI and this will improve core stability and thermal limits margins.

Once Recirc is in Fast Speed, after 1 minute **activate TRIGGER 1 (Control Rod Drift)**.
Cues:

When dispatched, after a 1 minute time delay report as the Auxiliary Building Operator, ready to isolate HCU 56-41 (PK). The valves for isolating the HCU are 103PK and 105PK. After another minute report the HCU is isolated.

Isolate the Control Rod using remote function z061_56_41.

If asked, report as Reactor Engineering, you will need time to perform the analysis for the control rod being inserted and its impact on core configuration.

The SRO will review Tech Specs. Tracking LCOs will be written.

Two (2) minutes after drifting Control Rod is isolated, **activate TRIGGER 2 (RPS 'A' MG Trip)**.

The Crew will report a loss of power on RPS Bus 'A' based on indications on H13-P610.
Cues:

If asked, report as Turbine Building Operator, the circuit breaker 52-132215 is trip free.

If asked, report as Control Building Operator, RPS Motor Generator 'A' is hot to the touch and there is a strange smell in the room. If asked, report the Alternate Feed EPA breakers for RPS 'A' are reset and closed.

If asked, report as Duty Manager (Operations Manager), we must leave RPS 'A' de-energized until a resolution on the FSAR and procedure has been made with Plant Licensing.

The CREW may elect to leave RPS 'A' de-energized until management is contacted concerning the Precaution and Limitation concerning having both RPS buses on Alternate feed.

When plant is stabilized and four (4) minutes after the RPS bus trip, **activate TRIGGER 3 (Second Control Rod Drift).**

Control rod 32-09 drifting.
Control rod 24-33 drifting.

Second Control Rod Drift will result in a manual scram per ONEP 05-1-02-IV-1.

The Crew will manually scram the reactor at which time the ATWS will appear.

Main Steam Bypass Valves will be failed closed.

The Crew will control reactor pressure with SRVs and attempt to lower reactor water level per EP-2A.

The Operator at the Controls should maintain reactor water level in specified bands using Feedwater.

If the Crew manually initiates Low Pressure ECCS to prevent injection, the Alternate power supplies for RPS 'A' and 'B' will require resetting before the attachments to insert control rods will be effective due to the inability to reset the scram signals. Resetting EPA breakers may take place once 15B42 and 16B42 are re-energized.

The Crew must call for the EPA breakers to be reset.

Alternate Feed EPAs are c71206 for RPS 'A' and c71207 for RPS 'B'.

If asked, transfer Circulating Water cooling to pump discharge, Remote Function Page N71195 to pump discharge.

Alternate Boron injection (Attachment 28) should be ordered based on indications that SLC is not injecting.

EP Attachments which may be requested:

Attachment 12 Defeat RHR Shutdown Cooling interlocks	6 minutes to DONE
Attachment 18 Defeat ATWS ARI	3 minutes to DONE
Attachment 19 Defeat RPS	4 minutes to DONE
Attachment 20 Defeat RCIS	5 minutes to DONE
Attachment 8 Defeat MSIV isolations	9 minutes to DONE
Attachment 1 Defeat RCIC High SP Transfer	8 minutes to DONE
Attachment 2 Defeat RCIC Trips	8 minutes to DONE

Attachment 28 (Alternate Boron) can not be done by any remote functions, just acknowledge the request.

TERMINATION

Once Control Rods are being inserted and the Lead Evaluator concurs the scenario may be terminated.

Critical Tasks

- Insert manual scram on multiple Control Rod Drifts.

- Inject Standby Liquid Control prior to Suppression Pool Temperature reaching 110 °F.

- Identify the need for Alternate Standby Liquid Control injection.

- Terminate and prevent injection from Feedwater and ECCS when conditions require entry into Level/Power Control.

- Commence injection into the reactor using Feedwater or RHR ‘A’ or ‘B’ through Shutdown Cooling before reactor level reaches –192”.

- Insert Control Rods in response to ATWS conditions.

Op-Test No.: _____ Scenario No.: __**1**___ Event No.: ___**1**__

Event Description: **Shift Reactor Recirculation Pump 'B' to Fast Speed.**

Time	Position	Applicant's Actions or Behavior
	RO	Shifts Reactor Recirculation Pump 'B' to Fast Speed per SOI 04-1-01-B33-1
	RO	Adjusts both loops of core flow to achieve 67 mlbm/hr total core flow.

Op-Test No.: _____ Scenario No.: __**1**___ Event No.: ___**2**__

Event Description: **Respond to control rod 56-41 drifting out of the core.**

Time	Position	Applicant's Actions or Behavior
	RO	Determines the control rod is drifting out of the core an applies a continuous insert signal to the control rod to insert the rod to position 00 and hold the control rod at 00 until the control rod is isolated per the CRD Malfunctions ONEP 05-1-02-IV-1.
	SS	Dispatches an operator to the HCU to isolate the affected HCU.
	SS	Reviews applicable Technical Specifications 3.1.3 Control Rod Operability Condition C Should declare control rod 56-41 INOP.
	SS	Contacts Reactor Engineering for core analysis with the control rod inserted and isolated.
	RO	Once the Control rod is isolated reset the Control Rod Drift indications on RCIS and the annunciator.

Op-Test No.: _____ Scenario No.: __**1**__ Event No.: ___**3**_

Event Description: **Respond trip of RPS Motor Generator 'A'.**

Time	Position	Applicant's Actions or Behavior
	RO	Recognizes annunciators indicating a loss of power RPS Bus 'A'.
	BOP	Investigates indications of power on H13-P610 and determines loss of power to Normal power source for RPS Bus 'A'.
	SS	Dispatches operators to RPS 'A' Motor Generator and possibly to the power supply to RPS 'A' Motor Generator at motor control center 13B22. Refers to ONEP 05-1-02-III-2. Determines RPS Bus 'A' may not be transferred to the Alternate source per 04-1-01-C71-1 section 3.5. Contacts the Duty Manager of the half scram due to the loss of the RPS MG. Contacts Electrical Maintenance about restoration of EPA Breakers for RPS 'B'.
	SS	Brief crew of status of RPS Buses.

Op-Test No.: _____ Scenario No.: __**1**__ Event No.: __**4**___

Event Description: **Respond to multiple Control Rod Drifts out of the core and subsequent Manual Scram (Control rods 32-09; 24-33)**

Time	Position	Applicant's Actions or Behavior
	RO	Recognizes control rod drifting out of the core. And reports to SS.
	SS	Determines this is a second control rod drifting and orders a manual insertion of a reactor scram.
	RO**	Places the Reactor Mode Switch to Shutdown or arms and depresses at least one Manual Scram Pushbutton per RPS
	RO	Verifies All Control Rods have fully inserted to position 00 and determines ALL Control Rods NOT fully inserted and reports to the SS. (ATWS)
	RO	If the Manual Scram Pushbuttons utilized confirms stable reactor pressure and places the Reactor Mode Switch in Shutdown.

Op-Test No.: _____ Scenario No.: __**1**__ Event No.: __**5**___

Event Description: **ATWS with NO Main Steam Bypass Valves**

Time	Position	Applicant's Actions or Behavior
	SS	Enters EP-2A.
	RO	Reports downshift of Recirc Pumps to Slow Speed.
	RO	On orders initiates ARI/RPT.
	BOP	On orders inhibits ADS.
	BOP	On orders initiates and overrides HPCS.
	RO	Realigns Condensate and Feedwater on Startup Level Control and maintains reactor level within level band specified by the SS.
	RO/BOP	Reports failure of the Main Steam Bypasses to open. Attempts to open Bypass valves using the Manual Bypass Jack and reports the valves will not respond.
	BOP	On orders maintains RPV pressure in band specified by SS using SRVs.
	BOP	When ordered by SS, restores Auxiliary Building, Containment, and Drywell isolation (Instrument Air, Plant Service Water, and Drywell Chilled Water.
	SS **	Orders Standby Liquid Control initiated prior to Suppression Pool Temperature reaching 110 °F.
	BOP **	When ordered, initiates Standby Liquid Control and identifies the failure of SLC to inject.
	SS **	Orders implementation of Attachment 28 Alternate Boron Injection.

Op-Test No.: _____ Scenario No.: __**1**__ Event No.: __**5**___ (cont.)

Event Description: **ATWS with NO Main Steam Bypass Valves (cont.)**

Time	Position	Applicant's Actions or Behavior
	SS **	Orders installation of Attachments 18, 19, and 20 of EP-2.
	SS **	Based on conditions orders Terminate and Prevent step to lower RPV level to reduce reactor power.
	BOP/RO **	Terminates and prevents systems ordered by SS.
Note: The LSS actuation will result in a loss of power to RPS 'B', RPS 'A' is already de-energized. The loss of both RPS buses will result in an isolation of the MSIVs. When LSS actuated for Division I and II RPS Alternate Feed EPA breakers for RPS 'A' & 'B' will trip requiring resetting EPA breakers to reset RPS for Control Rod insertion.		
	SS	Orders a lower pressure band to allow level control from Condensate / Feedwater.
	BOP	Lowers RPV pressure using SRVs.
	RO **	On orders of SS, initiates flow to the RPV from Condensate / Feedwater.
	RO **	Reports inability to reset RPS, requests EPA breakers for Alternate power sources to be reset.
	SS	Dispatches an operator to reset RPS EPA breakers on at least one bus and reports which bus has been reset.
	BOP/RO **	Insert Control Rods by scramming rods and inserting rods using CRD/RCIS. CRD Drive Pressure, Instrument Air to Containment and Auxiliary Building, and RPS reset.

Op-Test No.: _____ Scenario No.: __**1**__ Event No.: __**5**___ (cont.)

Event Description: **ATWS with NO Main Steam Bypass Valves (cont.)**

Time	Position	Applicant's Actions or Behavior
	SS	If level drops below –192 inches Fuel Zone, may elect to Emergency Depressurize. (Optional)
	SS	Orders Terminate and Prevent step for Emergency Depressurization. (Optional)
	BOP/RO	Terminates and prevents systems ordered by SS. (Optional)
	BOP/RO	If ordered opens 8 ADS SRVs. (Optional)
	SS	Upon Reactor pressure drop < 219 psig with 8 SRVs open, orders slow injection with Condensate and Feedwater. (Optional)
	BOP/RO	Injects with Condensate at prescribed rates by SS. (Optional)

Optionals for Emergency Depressurization leg of EP-2A are only if SS elects to use this based on RPV Water Level < -192 inches.

Facility: **GRAND GULF NUCLEAR STATION** Scenario No.: **2** Op-Test No.: **Day 2**

Examiners: _____ Operators:_____
_____ _____
_____ _____

Objectives: To evaluate the candidates' ability to operate the facility in response to the following evolutions:

1. Raise Reactor Power by withdrawing control rods.
2. Perform operator actions for a stuck control rod per ONEP.
3. Startup 2nd Reactor Feed Pump.
4. Respond to a failure of ESF UPS bus 1Y89 (inverter 1Y87).
5. Respond to a momentary loss of Grid per ONEPs.
6. Respond to a failure of Feedwater Line in the Drywell, initiate a reactor scram based on rising Drywell Pressure per EOPs.
7. Respond to a failure of Division 2 ECCS to initiate.
8. With a small break LOCA in the Drywell and reduced injection systems maintain reactor level per the EOPs.

Initial Conditions: Reactor Power is at 44 % bringing the plant up following an outage; Reactor Recirculation pumps are in Fast Speed at 60 % core flow; a single Reactor Feed Pump in three element Master Level Control.

INOPERABLE Equipment

APRM 'H' is INOP due to a failed power supply card
RHR 'C' is tagged out of service for motor oil replacement
CCW Pump 'B' is tagged out of service for pump seal replacement
RPS 'B' Motor Generator is out of service for EPA circuit breaker replacement, RPS 'B' is on its Alternate Source.
Service Air Compressor 'B' is in service with Service Air Compressor 'A' tagged out of service for oil replacement.

Appropriate clearances and LCOs are written.

Turnover: Continue to bring the plant to full power per IOI-2. There are scattered thundershowers reported in the Tensas Parish area.

Scenario **2** Day **2** (Continued)

Time Line	Event No.	Malf. No.	Event Type*	Event Description
	1*		R(RO)	Withdraw control rods to raise power. (Control Rod Pull Sheet & IOI 03-1-01-2)
	2	z022022_ 24_49	C (RO, BOP)	Control Rod 24-49 is stuck, un-stick control rod per ONEP. (ONEP 05-1-02-IV-1)
	3*		N (RO)	Startup 2nd Reactor Feed Pump (SOI 04-1-01-N21-1)
+30	4	r21143k	C (RO, BOP)	Respond to a trip of ESF UPS Bus 1Y89 and Inverter 1Y87. (Multiple SOIs and ARIs)
+40	5	r21135 z022022_ 36_33	M (ALL)	Respond to momentary Loss of Grid. (ONEP 05-1-02-I-4 & SOI Various) (GGNS Event 4/2003) Single Control Rod stuck withdrawn.
+45		rr063b@ 1%	C (ALL)	Recirc Line 'B' ruptures in the Drywell with leakage from the reactor.
		rr040b @0	I (BOP)	Failure of Division 2 ECCS to automatically initiate on High Drywell Pressure
		e22159a @ 0	C (BOP)	HPCS injection valve failure to open on initiation

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor
* Order of events may be reversed, this is acceptable.

Critical Tasks

- Recognize failure of Division 2 to initiate and manually initiate Division 2.
- Restore power and reestablish feed through condensate/Feedwater or RCIC, or lower reactor pressure to allow injection from low pressure systems.
- Upon receipt of second control rod drift inserts a manual reactor scram.

Crew Turnover:

Rx at 44% CTP

The plant is raising power following an outage. Reactor Recirculation Pumps are operating in Fast Speed at 60 % core flow. The 'A' Reactor Feed Pump is operating in Three Element Master Level Control.

APRM 'H' is failed due to a failed power supply card and bypassed.

CCW Pump 'B' is tagged out of service for pump seal replacement.
RHR 'C' Pump is tagged out of service for motor oil replacement.
RPS 'B' Motor Generator is out of service for EPA circuit breaker replacement, RPS 'B' is on its Alternate Source.
Service Air Compressor 'B' is in service with Service Air Compressor 'A' tagged out of service for oil replacement.

Appropriate clearances and LCOs are written.

Heater Drain Pump 'A' is pumping forward. The Reactor Engineer recommends we raise power for a margin as soon as possible after placing second RFPT in service.
IOI-2 step 5.14.1
Place RFPT 'B' in-service per 04-1-01-N21-1 sections 4.5.5 and 4.6.5.
Startup Pull Sheet Step 131b in the middle of the step with control rods at position 36.
Fraction of Core Boiling Boundary is < 1.0.

Plant EOOS is 9.6 GREEN.

There are scattered thunderstorms reported in the Tensas Parish area.

Simulator Setup:

Start the process from a new simulator load.
Reset to IC-13.

IC:	13
OOS:	APRM 'H' (Place in Bypass w/ Caution tag) CCW 'B' Pump (Place Red tag on start HS) RHR 'C' Pump (Place Red tag on start HS) RPS 'B' Bus (Select Alternate Source w/ Caution tag and Caution tag on RPS 'A' Selector Switch) Service Air Compressor 'A' (Place Red tag on start HS)

Active malfunctions: **z022022_24_49** Control Rod 24-49 stuck
rr040a @ 0 Drywell Pressure Transmitter B21-N094A
e22159a@0 HPCS E22-F004 Injection Valve failure
z022022_36_33 Control Rod 36-33 stuck

Active overrides None

Pending overrides None

Pending malfunctions: **r21143k** ESF UPS Inverter 1Y87/Panel 1Y89 loss (Trigger 1)
r21135 Loss of Grid (Trigger 2)
rr063a @ 1% Recirc Loop A leak ramp to **4%** after 3 minute time delay (Trigger 3)

Pending component malfunctions: None

Trigger files:

Trigger 1	ESF UPS Bus 1Y89/Inverter 1Y87 failure
Trigger 2	Loss of Grid
Trigger 3	LOCA

COMPONENT	PANEL	INDICATION or CONTROL	SIMULATOR CODE	STATUS	DONE
APRM H		DOWNSCALE	c51010h		
CCW PUMP B	P870-5C	GREEN LIGHT	lo_1p42m603b_g	OFF	
		HANDSWITCH	di_1p42m603b	STOP	
RHR PUMP C	P601-20C		e12642_OUT	OUT	
RPS MOTOR GENERATOR B	P610		c71077b		
Service Air Compressor B	P854		p52041	ON	
Service Air Compressor A	P854		p52040	OFF	
	P854	GREEN LIGHT	lo_1p52m601a	OFF	
	P854	HANDSWITCH	di_1p52m601a	STOP	

Place RHR C OOSVC handswitch to OOSVC.

Bypass Division 2 APRM Bypass Joystick to APRM H position.

Place CCW pump B handswitch to STOP.

Place RPS B to Alternate on H13-P610 and reset RPS B half scrams.

Shift Reactor Recirculation Pumps to Fast Speed and return transformer taps to 7.0 KV, establish 60 % core flow.

Reset RFPT 'B', leave with RFPT reset and discharge valve N21-F014B OPEN.

Place FCTR Cards to Normal on Remote Function Page

C51309 to NORM
C51310 to NORM

Startup all PDS / SPDS screens. Clear any graphs and trends off of SPDS.

Setup the presently used cyclops display and verify it is functional.

Ensure the correct startup sequence is available at the P680 for the present IC.

Install turnover guide, red tag, and LCO paperwork as applicable.

Advance all chart recorders and ensure all pens are inking properly.
(APRM chart recorders must be turned on and settings for scales on pens 0 – 125 scale)

SIMULATOR OPERATION

Once simulator is reinitialized and setup complete take the simulator out of Freeze.

Once the Crew has taken control note the simulator time.

The crew will continue power ascension per IOI-2 to a power level designated by the SS.
Cues:

If asked, as Reactor Engineer report sufficient margin to withdraw control rods starting at step 131b for power ascension. Withdrawal is allowed in either gang or individual drive at SS and ACRO discretion.

If dispatched, report as Auxiliary Building Operator, CRD Drive Water Filter differential pressure is within specifications on the Aux Building Rounds.

The Crew when (second rod of gang on Pull Sheet) Control Rod 24-49 is attempted to be withdrawn will note its inability to move.
After the second time to raise CRD Drive Water Pressure remove malfunction z022022_24_49.

The Crew will startup RFPT 'B'.
Cues:

If asked, as Turbine Building Operator inform the Crew Reactor Feed Pump 'B' is ready for operation.

If asked, respond as needed to requests during the Feed Pump Startup.

One minute after RFPT 'B' is started and in automatic, **activate TRIGGER 1 (1Y87 Failure)**.

Simulator Operator NOTE

If restoration of Instrument Air to the Auxiliary Building is delayed, Control Rods may begin to drift. At this time the crew will insert a manual reactor scram due to multiple control rod drifts. As soon as the scram report is made, **ACTIVATE TRIGGER 2 (Switchyard Fault) FOLLOWED by deletion of malfunction r21135.**

Cue:

If asked, respond as Control Building Operator that Inverter 1Y87 has charred marks on the outside of the cabinet and not indications of power on the normal or alternate sources of power. Request assistance from electricians.

If asked, respond as Electrical Supervisor that it appears the inverter attempted to transfer and some type of failure occurred in the static switch. The repairs will take several hours if the site has the required parts.

Crew may request Circ Water Pump A cooling be transferred to pump discharge. **Remote Function page Circulating Water N71195 to pump discharge.**

The crew will determine RPS 'A' has two APRMs failed such that the half scram cannot be reset.

Cue:

If notified, respond as Duty Manager, to continue power operation and suspend power ascension and all surveillances until the UPS panel is restored to normal.

Once crew has identified the UPS Bus failure and determined LCOs and actions, **activate TRIGGER 2 (Switchyard Failure) and remove r21135 immediately after insertion**.

One minute after the Reactor Scram, **activate TRIGGER 3 (LOCA) then after three minute time delay ramp to 4% over 2 minutes.**

Control Rod 36-33 should be identified as stuck out, however no ATWS actions are required.

Cues:

When notified, as the System Dispatcher report a ground fault occurred at Baxter Wilson and cleared itself and the Grid should remain stable.

When requested, reset under-voltage lockouts on BOP buses as required.
Remote Function Page - ESF Distribution (Use appropriate time delays to reset lockouts.)
R21351 Bus 11HD BUV reset
R21353 Bus 12HE BUV reset
R21355 Bus 13AD BUV reset
R21357 Bus 14AE BUV reset

When requested, Open Condensate Booster Pump and Reactor Feed Pump Suction Valves.

When dispatched, report E22-F004 will not move off of its seat, request mechanical support.

Respond as required to requests during power restoration. (Use appropriate time delays for equipment restorations allowing for transit times.)
Instrument Air (Start Unit II Instrument Air and verify P43-f289 open)
Radial Wells/Plant Service Water
Circ Water
Turbine Building Cooling Water
Diesel Generators

EP Attachments which may be requested:
Attachment 12 Defeat RHR Shutdown Cooling interlocks.

Crew may request Circ Water Pump A cooling be transferred to pump discharge. **Remote Function page Circulating Water N71195 to pump discharge.**

TERMINATION

Once Reactor Water Level is being restored using RCIC, Condensate/Feedwater, LPCS or LPCI and the Lead Evaluator concurs the scenario may be terminated.
NOTE: Scenario may be terminated once systems have been identified to be restored. i.e. TBCW, Instrument Air, Radial Wells/PSW

Critical Tasks

- Recognize failure of Division 2 to initiate and manually initiate Division 2.

- Restore power and reestablish feed through Feedwater, RCIC or Lower reactor pressure to allow injection from low pressure systems.

- Upon receipt of second control rod drift inserts a manual reactor scram.

Op-Test No.: _____ Scenario No.: __2__ Event No.: __1___

Event Description: **Withdraw control rods to raise power.**
(Control Rod Pull Sheet & 03-1-01-2)

Time	Position	Applicant's Actions or Behavior
	SS	Provides Reactivity brief to crew.
	RO	Verifies control rods and positions per Pull Sheet and selects control rods per next gang of control rods. (May select Individual or Gang movement and may select any Control Rod in the Gang.)
	BOP	Act as Verifier for Control Rod movements.
	RO	Moves Control Rods from Position 36 to position 48.

Gang is presently at position 36.
Step 131b (Control Rod 40-17) from Position 12 - 48.
Step 131b (Control Rod 24-49) from Position 12 - 48. Control Rod 24-49 is stuck.
Step 131b (Control Rod 16-25) from Position 12 – 48.
Step 131b (Control Rod 48-41) from Position 12 – 48.

Step 132 (Control Rod 32-09) from Position 12 - 48.
Step 132 (Control Rod 32-57) from Position 12 - 48.
Step 132 (Control Rod 08-33) from Position 12 - 48.
Step 132 (Control Rod 56-33) from Position 12 - 48.

Op-Test No.: _____ Scenario No.: __2__ Event No.: __2___

Event Description: **Control rod 24-49 is stuck, un-stick control rod per ONEP. (ONEP 05-1-02-IV-1)**

Time	Position	Applicant's Actions or Behavior
	RO	Once Control Rod 24-49 is attempted to be moved will recognize control rod is immovable.
	SS	Obtains CRD Malfunctions ONEP 05-1-02-IV-1 and verifies action per section 3.5, orders CRD Drive pressure raised ~260 psid.
	BOP	Raises CRD Drive pressure ~ 260 psid using C11-F003 Pressure Control Valve on H13-P601.
	RO	Attempts to move the Control Rod and reports no movement.
	BOP	Raises CRD Drive pressure ~25 psid using C11-F003 Pressure Control Valve on H13-P601.
	RO	Attempts to move the Control Rod and reports movement and positions Control Rod 24-49 at position 38.
	BOP	Returns CRD Drive pressure to ~245 psid using C11-F003 Pressure Control Valve on H13-P601.

Op-Test No.: _____ Scenario No.: __**2**__ Event No.: __3___

Event Description: **Startup Reactor Feed Pump 'B'. (04-1-01-N21-1)**

Time	Position	Applicant's Actions or Behavior
	RO	Resets and starts up RFPT and places the pump on the master level controller in automatic per SOI. Reactor water level will be controlled by the operating RFPT.
	BOP	Monitors Reactor power and pressure.

Op-Test No.: _____ Scenario No.: __2__ Event No.: __4___

Event Description: **Respond to a loss of ESF Inverter 1Y87 and Distribution panel 1Y89**

Time	Position	Applicant's Actions or Behavior
	RO/BOP	Announces and acknowledges alarms on H13-P680. - Half Scrams on RPS 'A' - RWCU system trip - Division I Radiation Monitors are INOP causing SBGT A to initiate - ½ MSIV isolation signal - Division I Auxiliary Building isolation
	RO	Observes and reports loss of power to APRMs A & E.
	BOP	Observes and reports ½ isolation on MSIVs and SBGT A initiation.
	SS	Dispatches the Control Building Operator and Electricians to investigate the failure of the Static Inverter and panel.
	RO	Informs SS that RPS half scrams due to APRMs cannot be bypassed. (joystick only allows bypassing of one APRM and two are failed.)
	SS	Verifies Technical Specifications for LCOs concerning two APRMs in the same division INOP and the actions per 3.3.1.1 and 3.3.1.2. Total of 3 APRMs INOP.
	SS	Contacts the Duty Manager informing of the RPS Half Scram.

Tech Spec actions may be reviewed following the scenario as follow up questions, if the plant is scrammed due to multiple control rod drifts.

Op-Test No.: _____ Scenario No.: __2__ Event No.: __4___ (CONT.)

Event Description: **Respond to a loss of ESF Inverter 1Y87 and Distribution panel 1Y89**

Time	Position	Applicant's Actions or Behavior
	SS	Orders bypassing Auxiliary Building, CTMT/Drywell isolation and restoration of Instrument Air, Plant Service Water, and Drywell Chilled Water.
	BOP	Restores Instrument Air, Plant Service Water, and Drywell Chilled Water as ordered.
	BOP/RO	Dispatch operator to transfer Circ Water Cooling to pump discharge.
EVALUATOR NOTE: If restoration of Instrument Air to the Auxiliary Building and Containment is delayed, multiple Control Rod Drifts may occur. If this occurs upon receipt of the second control rod drift the RO will manually scram the reactor. This is acceptable.		
	RO **	Upon receipt of multiple control rod drifts, inserts a manual reactor scram.
	RO	Announces Reactor Scram with all control rods except one (36-33) fully inserted. Gives Scram report.

Op-Test No.: _____ Scenario No.: __2__ Event No.: __5___

Event Description: **Respond to a momentary loss of the Entergy Grid with small break LOCA (GGNS SCRAM 107 April 2003)**

Time	Position	Applicant's Actions or Behavior
	ALL	Announces and acknowledges alarms on Panels.
	RO	Announces Reactor Scram with all control rods except one (36-33) fully inserted and loss of Feedwater/Condensate, Reactor Recirculation, Main Turbine, and MSIV isolation.
	BOP	Announces starting of Emergency Diesel Generators and re-energizing of ESF buses.
	BOP/RO **	Verifies power to BOP buses and calls for Under-voltage Lockouts to be reset by the Turbine Building operator on the BOP Buses.
	SS	Enters EP-2 for Reactor Level Control and gives bands to control RPV level and assesses systems available to maintain reactor level.
	BOP/RO**	Starts RCIC
	SS	Directs restoration of Condensate and Feedwater for injection to the reactor. (Takes a lot of time to restore.)
	SS	Directs the restoration of the Drywell, Containment, and Auxiliary Building to support plant restoration. Dispatches operators to the River for restoration.
	BOP	Restores the Drywell, Containment, and Auxiliary Building to support plant restoration.

Note: SS will have to prioritize systems to be restored.

Op-Test No.: _____ Scenario No.: __2__ Event No.: __5___ (CONT.)

Event Description: **Respond to a momentary loss of the Entergy Grid with small break LOCA**

Time	Position	Applicant's Actions or Behavior
	RO/BOP	Determine equipment lost from power loss (04-1-01-R21-11, 12, 13, 14, 15, 16, 17, 18 may be used to assist with determination using load lists in SOI). Instrument Air Radial Wells/Plant Service Water Control Rod Drive
	BOP	Controls Reactor pressure using SRVs. (May be allowed to operate automatically on Low-Low Set. This is acceptable.)
	RO/BOP	Identifies Drywell pressure rising and initiation of ECCS and isolations of the remaining motor operated Drywell, Containment, and Auxiliary Building isolation valves.
	BOP**	Identifies the failure of Division II to automatically initiate and manually initiates Division II ECCS.
	BOP	Reports failure of HPCS Injection valve to open.
	BOP/RO	Restores TBCW to support Condensate and Feedwater.
	RO**	Restores Condensate and Feedwater and maintains level band specified by the SS.
	SS	If required based on level, utilize LPCS/RHR 'A\B' for injection to the Reactor and lowers pressure to accommodate injection
	BOP/RO**	As directed, utilizes LPCS/RHR 'A\B' for injection to the reactor for level control.

Op-Test No.: _____ Scenario No.: __2__ Event No.: __5___ (CONT.)

Event Description: **Respond to a momentary loss of the Entergy Grid with small break LOCA**

Time	Position	Applicant's Actions or Behavior
	SS	Directs use of RHR 'A' & 'B' for Suppression Pool cooling as necessary.
	BOP	Starts RHR 'A' & 'B' in Suppression Pool cooling.
	SS	Dispatches operators to degas the Main Generator. Not a high priority.
	SS	Orders maximizing of CRD flow to Reactor, if required to maintain RPV level.
	BOP/RO	Maximizes CRD flow to the Reactor.

Facility: **GRAND GULF NUCLEAR STATION** Scenario No.: **3** Op-Test No.: **Day 2**

Examiners: _____ Operators:_____
_____ _____
_____ _____

Objectives: To evaluate the candidates' ability to operate the facility in response to the following evolutions:

1. Raise Reactor Power by withdrawing control rods.
2. Start 2nd Circulating Water Pump.
3. Respond to an EHC failure.
4. Respond to a loss of Main Condenser Vacuum.
5. Respond to an automatic and manual scram function failure ATWS ARI/RPT will insert control rods with two control rods stuck withdrawn.
6. Respond to a steam leak in the Auxiliary Building Steam Tunnel and a failure of Group 1 to isolate.
7. Take actions per the EOPs in response to two stuck control rods following a Reactor Scram.
8. Take actions per EOPs to control RPV parameters with a failure of the MSIVs to isolate the steam leak.

Initial Conditions: Reactor Power is at 45 % continuing power ascension to rated conditions.

INOPERABLE Equipment

APRM 'H' is INOP due to a failed power supply card
RHR Pump 'C' is tagged out of service for motor oil replacement
CCW Pump 'B' is tagged out of service for pump seal replacement
RPS 'B' Motor Generator is out of service for EPA circuit breaker replacement, RPS 'B' is on its Alternate Source.
Service Air Compressor 'B' is in service with Service Air Compressor 'A' tagged out of service for oil replacement.

Appropriate clearances and LCOs are written.

Turnover: Continue power ascension. There are scattered thundershowers reported in the Tensas Parish area.

Scenario **3 Day 2** (Continued)

Time Line	Event No.	Malf. No.	Event Type*	Event Description
	1*		R (RO)	Raise reactor power by withdrawing control rods. (IOI 03-1-01-2 and Control Rod Movement Sheet)
	2*		N (BOP)	Start 2nd Circulating Water. (SOI 04-1-01-N71-1)
	3			Respond to an EHC leak. (ARI 04-1-02-1H13-P680)
	4	fw163a@5 % ramp to 10%	C (RO/ BOP)	Respond to a lowering Main Condenser Vacuum. (ONEP 05-1-02-V-8)
	5	c71162	C (RO)	Recognize a failure to automatically scram and manually scram the reactor.
	6	ms066b @ 0.2% c71076	M (ALL)	Recognize and respond to a steam leak in the Auxiliary Building Steam Tunnel.
		epatt09 ms067b @ 20%	I (BOP)	Recognize the failure of Group 1 to automatically isolate and take actions to isolate the Main Steam Lines (ONEP 05-1-01-III-5)
		ms183b ms184b		Recognize the failure of a single Main Steam line to isolate and take actions for mitigation of the leak.
		z022022 _08-29 _12_09	C (RO)	Recognize the failure of two control rods to fully insert on the Reactor Scram.

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

**Crew may reverse the order.*

Critical Tasks

- Manually scram the reactor.
- Isolate the main steam lines.

Scenario **3 Day 2** (Continued)

Crew Turnover:

Rx at 45% CTP.

The plant is raising power following an outage.

APRM 'H' is failed due to a failed power supply card and bypassed.

RHR Pump 'C' is tagged out of service for motor oil replacement.
CCW Pump 'B' is tagged out of service for pump seal replacement.
RPS 'B' Motor Generator is out of service for EPA circuit breaker replacement, RPS 'B' is on its Alternate Source.
Service Air Compressor 'B' is in service with Service Sir Compressor 'A' tagged out of service for oil replacement.

Appropriate clearances and LCOs are written.

Continue to bring the plant to full power per IOI-2 step 5.14.2.

Control Rod Movement Sheet step 132.

Plant EOOS factor is 9.6 GREEN.

There are scattered thunderstorms reported in the Tensas Parish area.

Simulator Setup: (Scenarios may be setup and shot into encrypted ICs and Password protected.)

Start the process from a new simulator load.
Reset to IC-14.

Verify or perform the following:

IC:	14
OOS:	APRM H (Place in Bypass w/. Caution tag) RHR C Pump (Place Red tag on start HS, place OOSVC switch to OOSVC) CCW B Pump (Place Red tag on start HS) RPS B Selector Switch to Alternate Source (Place a Caution tag on selector switch and a Caution tag on RPS A selector switch) Service Air Compressor A (Place Red tag on HS)

Active malfunctions: **z022022_08_29** Control Rod 08-29 stuck
z022022_12_09 Control Rod 12-09 stuck
ms183b MSIV B21-F022B failed open **(as-is)**
ms184b MSIV B21-F028B failed open **(as-is)**
c71162 Failure to Automatic and Manual scram

Active overrides **epatt09 DONE** EP Attachment 9 Defeat MSIV/Group 1 isolation
(insert override after simulator is initialized)

Pending overrides None

Pending malfunctions: **fw163a@ 5%** Main Condenser leak ramp to 10% over 4 minutes (TRG 1)
ms066b @ 0.2% Main Steam Line B steam leak in Auxiliary Building Steam Tunnel (TRG 2) ramp to 20% over 6 minutes.
ms067b @ 20% Main Steam Line B Rupture ramp to 40% over 7 minutes (TRG 3).

Pending component malfunctions:

Trigger files:

Trigger 1	Loss of Main Condenser Vacuum
Trigger 2	Steam leak in Aux Bldg Steam Tunnel; Automatic Scram Failure and Group 1 Isolation Failure
Trigger 3	Steam Rupture in Aux Bldg Steam Tunnel

COMPONENT	PANEL	INDICATION or CONTROL	SIMULATOR CODE	STATUS	DONE
APRM H		DOWNSCALE	c51010h		
CCW PUMP B	P870-8C	GREEN LIGHT	lo_1p42m603b_g	OFF	
		HANDSWITCH	di_1p42m603b	STOP	
RHR PUMP C	P601-20C		e12642_out	OUT	
RPS MOTOR GENERATOR B	P610		c71077b		
Service Air Compressor B	P854		p52041	ON	
Service Air Compressor A	P854		p52040	OFF	
	P854	GREEN LIGHT	lo_1p52m601a	OFF	
	P854	HANDSWITCH	di_1p52m601a	STOP	

Bypass Division 2 APRM Bypass Joystick to APRM H position.

Place CCW pump B to STOP (to clear Standby light).

Place RHR C OOSVC handswitch to OOSVC.

Start Circ Water Pump 'B' and secure Circ Water Pump 'A'. Circ Water should be in single pump dual train.

Ensure only two Condensate and Condensate Booster Pumps are operating.

Heater Drain Pump 'A' in pump forward.

Startup all PDS / SPDS screens. Clear any graphs and trends off of SPDS.

Setup the presently used Cyclops display and verify it is functional.

Ensure the correct startup sequence is available at the P680 for the present IC.
Install turnover guide, red tag, and LCO paperwork as applicable.

Advance all chart recorders and ensure all pens are inking properly.
(APRM chart recorders must be turned on and settings for scales on pens 0 – 125 scale)

SIMULATOR OPERATION SCENARIO 3

Once simulator is reinitialized and setup complete take the simulator out of Freeze.

Once the Crew has taken control note the simulator time.

The Crew will raise reactor power by withdrawing control rods.
(Crew may reverse these.)
At some point between 45 – 55% power, the crew will start Circ Water Pump 'A'.
Cue:

If asked, respond as the Outside Operator that Unit I Instrument Air Compressor is operating in lead. (Simulator Operator remote function page and turn ON Unit I Instrument Air Compressor.)
If asked, respond as Chemistry samples will be taken for analysis and modification of chemistry controls.
If asked, respond as Turbine Building Operator for opening and closing the column vent N71-F039A.
If asked, respond as Turbine Building Operator that Circ Water pump 'A' is reading 500 amps on all three phases.

Two (2) minutes after the Circ Water Pump is started **Cue the crew as the Turbine Building Operator that upon viewing the camera in the 166 ft turbine area it appears there is EHC fluid leaking out of the LP Stop Valve 'B'.**

Cue:

If asked, respond as Turbine Building Operator that level in the EHC Reservoir is 1.55 meters, when checked on rounds earlier was reading 1.60 meters.

Once the report has been made to the Crew, **activate TRIGGER 1 (Main Condenser Vacuum leak).**

Upon receipt of the first condenser vacuum alarm, ramp vacuum leak to final value.

The SS will identify the point at which a manual scram will be inserted.

Operators will be dispatched to the Turbine Building to check for leaks in the condenser area.

The Crew will note the inability to insert a manual scram and they will enter EP-2A and downshift Recirc Pumps to LFMGs, and activate ATWS ARI/RPT. ATWS ARI will insert control rods except for two which are stuck keeping operations in EP-2A.

Three (3) minutes after the plant is scrammed, **activate TRIGGER 2 (Auxiliary Building Steam Tunnel Steam leak with failure of Group 1 isolation).**

When Crew manually isolates the steam lines, **activate TRIGGER 3 (Steam rupture in Auxiliary Building Steam Tunnel).**

Two (2) Minutes after Reactor Scram, report as Security white smoke or steam is coming out of the top of the Auxiliary Building.

If contacted, report as Health Physics there are NO abnormal radiation surveys of the Auxiliary Building.

If contacted, report as Chemistry there are NO verified leaking fuel bundles in the reactor.

If SS decides to install attachments to attempt to insert the two stuck control rods.

Attachment 18	Defeat ATWS ARI	4 minutes to DONE
Attachment 19	Defeat RPS	5 minutes to DONE
Attachment 20	Defeat RCIS	6 minutes to DONE
Attachment 2	Defeat RCIC Trips	8 minutes to DONE
Attachment 1	Defeat RCIC Suction Xfer	8 minutes to DONE
Attachment 12	Defeat RHR SDC Interlocks	6 minutes to DONE

TERMINATION

Once reactor pressure has lowered to < 600 psig and a system is aligned for RPV level control and the Lead Evaluator concurs the scenario may be terminated.

Critical Tasks

- Manually scram the reactor.

- Isolate the main steam lines.

Op-Test No.: _____ Scenario No.: __3__ Event No.: __1___

Event Description: **Withdraw control rods to raise power. (Control Rod Pull Sheet & 03-1-01-2)**

Time	Position	Applicant's Actions or Behavior
	SS	Provides Reactivity brief to crew.
	RO	Verifies control rods and positions per Pull Sheet and selects control rods per next gang of control rods. (May select Individual or Gang movement and may select any Control Rod in the Gang.)
	BOP	Act as Verifier for Control Rod movements.
	RO	Moves Control Rods from Position 12 to position 48.

Events may be reversed by the crew.

Op-Test No.: _____ Scenario No.: __3__ Event No.: __2___

Event Description: **Start Circ Water Pump 'A' and align Circ Water for Dual Pump Dual Train operation (SOI 04-1-01-N71-1)**

Time	Position	Applicant's Actions or Behavior
	BOP	Realigns Circ Water for Dual Train Operation.
	BOP	Raises taps on BOP Transformer 12B to 7.2 KV.
	BOP	Starts up Circ Water Pump 'A'.
	BOP	Returns taps to 7.0 KV.

Op-Test No.: _____ Scenario No.: __3__ Event No.: __3/4___

Event Description: **EHC leak & Loss of Main Condenser Vacuum (ONEP 05-1-02-V-8) and subsequent Manual Scram**

Time	Position	Applicant's Actions or Behavior
	BOP	Investigates Offgas trouble and reports rising Offgas flow.
	SS	Directs lowering of power by recirc flow or control rod insertion using insertion sequence. (As necessary.)
	SS	Dispatches local operators to monitor condenser area for leaks.
	SS	Determines minimum vacuum for insertion of manual scram and communicates this to crew.
	RO	Reduces power with Recirc Flow if directed. (Determines Total Core Flow is already at 67Mlbm/hr.)
	RO	Verifies control rods and positions per Pull Sheet and selects control rods per next gang of control rods. (May select Individual or Gang movement and may select any Control Rod in the Gang.) (As necessary)
	BOP	Act as Verifier for Control Rod movements and monitors Main Condenser Vacuum.
	RO	Inserts Control Rods per Control Rod Movement Sequence Sheet to reduce turbine load.
	SS	Based on lowering Main Condenser Vacuum, orders manual scram of the Reactor.

Op-Test No.: _____ Scenario No.: __3__ Event No.: __**5**___

Event Description: **Failure to Scram**

Time	Position	Applicant's Actions or Behavior
	RO**	Places the Reactor Mode Switch to Shutdown or arms and depresses at least one Manual Scram Pushbutton per RPS Division (A & B).
	RO	Reports failure of RPS to actuate.
	SS	Enters EP-2A.
	RO	Reports downshift of Recirc Pumps to Slow Speed.
	RO**	On orders initiates ARI/RPT.
	BOP	On orders inhibits ADS.
	BOP	On orders initiates and overrides HPCS.
	RO	Reports all control rods have fully inserted except for two (08-29 & 12-09)
	SS	Specifies RPV level band and method of pressure control.
	RO	Realigns Condensate and Feedwater on Startup Level Control and maintains reactor level within level band specified by the SS. RFPTs will require the Vacuum Trip to be overridden with permission of the SS if vacuum drops low enough.
	BOP	Controls reactor pressure based on orders of SS with Main Steam Bypass valves, if available.

Op-Test No.: _____ Scenario No.: __3__ Event No.: __6___

Event Description: **Respond to a steam leak in Auxiliary Building Steam Tunnel with a failure to isolate. (EP-4) w/ Automatic Scram failure**

Scenario is geared toward EP-4 actions, stuck control rods is for operator board awareness.

Time	Position	Applicant's Actions or Behavior
	BOP	Announces Steam Tunnel temperature alarms and EP-4 entry and failure of Group 1 to isolate.
	BOP**	Manually isolates MSIVs and reports failure of 'B' Main Steam Line to isolate and closes B21-F098B Main Steam Shutoff Valve. (Operator may close all 4 B21-F098's.)
	SS	Enters EP-4 for Steam leak in Auxiliary Building. (SS should recognize no conditions exist warranting lowering of reactor level for ATWS.)
	CREW	Maintains reactor water level using RCIC. Condensate and Feedwater may be used when reactor pressure drops below Condensate Booster Pump shutoff head.
	SS	As conditions dictate may elect to lower reactor pressure using SRVs to reduce energy release to Secondary Containment.
	BOP or RO	On orders of SS lowers reactor pressure using SRVs.