Draft Submittal

(Pink Paper)

1. ADMINISTRATIVE TOPICS OUTLINE (ES-301-1)
2. CONTROL ROOM SYSTEMS & FACILITY WALK-THROUGH TEST OUTLINE (ES-301-2)
3. ADMINISTRATIVE JPMS
4. IN-PLANT JPMS
5. CONTROL ROOM JPMS (SIMULATOR JPMS)

ST. LUCIE MARCH/APRIL 2006-301 EXAM

05000335/2006301 AND 05000389/2006301

MARCH 20 - 29, 2006 AND APRIL 6, 2006

4/24/06

Facility: St. Lucie	Date of Examination: March 2006
Examination Level (circle one): SRO	Operating Test Number: ***NRC***

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	N	Determine the required actions when declaring an EDG *inoperable* with 2C AFW Pump already *inoperable*. K/A: 2.1.12 (4.0)
Conduct of Operations	N	Given a set of conditions, calculate the condensate inventory required to remove decay heat and RCP heat. K/A: 2.1.25 (3.1)
Equipment Control	M	Perform Reactor Coolant System (RCS) water inventory balance surveillance. K/A: 2.2.12 (3.4)
Radiation Control	P, M	Given a set of conditions, calculate stay time and apply facility emergency dose limits. K/A: 2.3.1 (3.0)
Emergency Plan	N	Evaluate a change in plant conditions and initiate actions to upgrade an event. K/A: 2.4.41 (4.1)

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.

*Type Codes & Criteria:
(C)ontrol room
(D)irect from bank (≤ 3 for ROs; ≤ for SROs & RO retakes)
(N)ew or (M)odified from bank (> 1)
(P)revious 2 exams (≤ 1; randomly selected)
(S)imulator

DRAFT

Facility: St. Lucie	Date of Examination: March 2006
Exam Level (circle one): SRO(I)	Operating Test No.: ***NRC***

Control Room Systems@ (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)			
System / JPM Title		Type Code*	Safety Function
S-1	Perform an emergency boration.	P, A, E, S	1
S-2	Establish once thru cooling.	M, P, A, E, S	2
S-3	Perform RPS Logic Matrix Test	D, S	7
S-4	Respond to closure of a CCW isolation valve for an RCP Seal Cooler.	N, A, S	4P
S-5	Transfer feed from AFW to MFW on one SG.	N, L, A, S	4S
C-6	Respond to CCW Excessive Activity (Unit 1).	D, E, C	8
S-7	Restore power to 4.16 KV Bus 2B3 from offsite.	D, S	6
S-8	N/A		
In-Plant Systems@ (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
P-1	Operate a SG Atmospheric Dump Valve (Unit 1).	D, E	4S
P-2	Start an EDG during a station blackout.	M, A, E	6
P-3	Initiate a Containment hydrogen purge (Unit 1).	P, E, R	5

@ All control room (and in-plant) systems must be different and serve different safety functions; in-plant systems and functions may overlap those tested in the control room.

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1
(L)ow-Power	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

DRAFT

FPL

Reminder to the TPE Evaluator Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

DETERMINE THE REQUIRED ACTIONS WHEN DECLARING AN EDG INOPERABLE WITH 2C AFW PUMP ALREADY INOPERABLE - UNIT 2

NRC A1-1

Developed/Revised by: J. L. Lloyd 12/21/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Determine the required actions when declaring an EDG *inoperable* with 2C AFW Pump already *inoperable.*

Faulted JPM? No

Facility JPM #: New

K/A Rating(s): G2.1.12 (4.0)

Duty Area(s): N/A

Task Information: None

Task Standard:

EDG 2A and 2A AFW Pump declared inoperable and documentation completed.

Evaluation Location:

Simulator	In Plant	Lab	Other
			X

Performance Level:

Perform	Simulate	Discuss
X		

References:
- 2-ARP-01-B36 and 2-ARP-06-A25 (Annunciator7-1)
- Technical Specifications
- NOP-100.01, Equipment Out of Service, Revision 12
- 2-OP-2200050A, Emergency Diesel Generator Periodic Test and General Operating Instructions, Revision 68
- OPS-503, Operations Policies

Validation Time: 27 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- Perform this JPM in a setting with a copy of TS available.
- Two (2) copies of NOP-100.01, Equipment Out of Service, Appendix A
- 2-2200050A, Emergency Diesel Generator Periodic Test and General Operating Instructions, Appendix B
- OPS-503, Operations Policies, Section 3/4.8

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Determine the required actions when declaring an EDG *inoperable* with 2C AFW Pump already *inoperable*.
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

- Unit 2 is at 100% power.
- 2C AFW Pump is cleared and tagged to repair a steam leak. 68 hours remain on the 72 hour action statement. Alarm B-36, 2A EMERG D/G LOCAL ALARM, actuated several minutes ago. The operator dispatched reports local alarm panel annunciator 7-1, GENERATOR GROUND, actuated and has confirmed the Ground Fault Relay dropped. The Work Control Center reports that EDG 2A must be isolated for the maintenance technicians to troubleshoot for the ground location.

INITIATING CUES:

- You are the Unit Supervisor. Assuming that the EDG 2A alarms are valid, determine the required actions, and document in accordance with approved procedures.

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

START TIME: _____

DETERMINE THE REQUIRED ACTIONS WHEN DECLARING AN EDG INOPERABLE WITH 2C AFW PUMP ALREADY INOPERABLE	
STEP 1: REVIEW Technical Specifications (TS). STANDARD: **REVIEW** Technical Specification 3.8.1.1 and 3.7.1.2.a. **EXAMINER'S NOTE: JPM steps can be completed in any order.** COMMENTS:	_____ SAT _____ UNSAT
STEP 2: DETERMINE EDG 2A operability. STANDARD: **DETERMINE** TS 3.8.1.1 Action b applies, and the EDG 2A is INOPERABE, since EDG 2A must be isolated. **SPECIFY** Surveillance Requirement 4.8.1.1.1.a must be performed within one hour, and at least once per 8 hours thereafter. (Candidate should **DETERMINE** problem is **NOT** a common mode failure for all EDGs, but may wait for confirmation.) **EXAMINER'S NOTE: Candidate may also refer to OPS-503, Operations Policies, Section 3/4.8 for additional guidance.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 3: DETERMINE redundant features operability. STANDARD: **DETERMINE** 2A AFW Pump MUST be **DECLARED INOPERABLE** after 4 hours since 2C AFW Pump is currently **INOPERABLE**. **DETERMINE** TS 3.7.1.2 Action Statement is **EXCEEDED**; the Unit must be in at least **HOT STANDBY** within the next 6 hours and in **HOT SHUTDOWN** within the following 6 hours. **EXAMINER'S NOTE:** **This determination may be made after the candidate refers to NOP-100.01 and/or 2-2200050A, Appendix B.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 4: COMMUNICATE / DOCUMENT the problem.

STANDARD:
- **INFORM** SM.
- **GENERATE** a NPWO.
- **DIRECT** a chronological log entry and Out-of-Service entry.
- **COMPLETE** the Equipment Out-of Service Log (NOP-100.01, Appendix A).
- **PERFORM** update of On-Line Risk Manager (OLRM).

_____ SAT

_____ UNSAT

EXAMINER'S CUES: (As each above item is determined):

- **(As Shift Manager): "I acknowledge your report. Plant management will be notified, and I will initiate an update of the On-Line Risk Manager.**
- **STATE: "Work Control will complete the NPWO."**
- **(As Reactor Operator): "I will complete the chronological log entry and Out-of-Service entry.**
- **STATE: "For the purpose of this JPM, COMPLETE NOP-100.01, Appendix A, Blocks (1)-(9), by hand for each *inoperable* piece of equipment that you have identified. You may leave Block (6) blank.**

HANDOUT

- **PROVIDE a copy of NOP-100.01, Appendix A, for each component declared *inoperable*.**

COMMENTS:

STEP 5: COMPLETE NOP-100.01, Appendix A for **2A EDG**.

STANDARD:

1. Equipment Declared Out of Service: (system #22) **2A EDG**
2. Reason Out of Service: **Generator ground**
3. TS LCO: **3.8.1.1.b**
4. Risk Significant: **Yes**
5. Unscheduled Surveillances: **Yes** (Offsite power every eight (8) hours, would be tracked on Data Sheet 30).
6. Return to Service Required By: (Instructed may leave blank)
7. RCO: Chronological log entry checked **Yes**
8. US/SM/WCCS: *Performs OP-2-2200050A, Appendix B. (May note management notification required.)
9. Removed from Service: **Current date, current time, (US circled), Mode 1**

EXAMINER'S CUE: ***IF the candidate has already determined 2A AFW Pump is *inoperable* then STATE: "I will complete OP-2-2200050A, Appendix B".**

IF the candidate has NOT yet determined 2A AFW Pump is *inoperable,* THEN: PROVIDE a copy of OP-2-2200050A, Appendix B, and STATE: "Except for 2C AFW Pump, all the equipment listed on OP-2-2200050A, Appendix B, is NOT out-of-service."

COMMENTS:

_____ SAT

_____ UNSAT

STEP 6:	COMPLETE NOP-100.01, Appendix A for 2A AFW Pump.	
STANDARD:	1. Equipment Declared Out of Service: (system#09) **2A AFW Pump** 2. Reason Out of Service: **2A EDG and 2C AFW Pump** (or redundant equipment) **inoperable** 3. TS LCO: **3.7.1.2.b** and 3.8.1.1.b 4. Risk Significant: **Yes** 5. Unscheduled Surveillances: **No** 6. Return to Service Required By: Instructed may leave blank 7. RCO: Chronological log entry checked **Yes** 8. US/SM/WCCS: May note management notification required. **9.** Removed from Service: **Current date, current time, (US circled), Mode 1.**	_____ SAT _____ UNSAT
EXAMINER'S CUE:	**After the candidate has completed a NOP-100.01, Appendix A, for EACH component they have declared *inoperable*, STATE: "This JPM is complete."**	
COMMENTS:		
END OF TASK		

STOP TIME: _____

N/A

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

- Unit 2 is at 100% power.
- 2C AFW Pump is cleared and tagged to repair a steam leak. 68 hours remain on the action statement. Alarm B-36, 2A EMERG D/G LOCAL ALARM, actuated several minutes ago. The operator dispatched reports local alarm panel annunciator 7-1, GENERATOR GROUND, actuated and has confirmed the Ground Fault Relay dropped. The Work Control Center reports that EDG 2A must be isolated for the maintenance technicians to troubleshoot for the ground location.

INITIATING CUES:

- You are the Unit Supervisor. Assuming that the EDG 2A alarms are valid, determine the required actions, and document in accordance with approved procedures.

The scanned key for the admin JPMs is in the following file (double-click to open):

Adobe Acrobat
Document

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

CALCULATE THE CONDENSATE INVENTORY REQUIRED TO REMOVE DECAY HEAT AND RCP HEAT - UNIT 2

NRC A1-2

Developed/Revised by: J. L. Lloyd 12/21/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Given a set of conditions, calculate the condensate inventory required to remove decay heat and RCP heat. – Unit 2.

Faulted JPM? No

Facility JPM #: New

K/A Rating(s): 2.1.25 (3.1)

Duty Area(s): N/A

Task Information: 07200105

Task Standard:

Available CST inventory and time until SDC entry is required calculated within the critical step band.

Evaluation Location:				Performance Level:		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
			x	X		

References:
- 2-EOP-15, Functional Recovery, Revision 28
- 2-EOP-99, Appendices/Figures/Tables/Data Sheets, Revision 30

Validation Time: 12 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- 2-EOP-15, Functional Recovery
- 2-EOP-99, Appendices/Figures/Tables/Data Sheets, Data Sheet 1, Figures 3 and 4
- Calculator

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Calculate the condensate inventory required to remove decay heat and RCP heat – Unit 2.
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

- A Unit 2 reactor trip occurred from 100% two (2) hours ago.
- The operating crew is performing 2-EOP-15, Functional Recovery, Section 4.6, RCS and Core Heat Removal.
- Neither Shutdown Cooling Pump is currently available but a cooldown to COLD SHUTDOWN will be required.
- Reactor Coolant System Tcold is **535°F.**
- #2 Condensate Storage Tank (CST) level is **23.5 feet**.

INITIATING CUES:

The Unit Supervisor has directed you to perform 2-EOP-15, Section 4.6, Step 33 – Evaluate Condensate Inventory, so that Work Control can be directed as to when to have at least one Shutdown Cooling Pump available.

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

START TIME: _____

CALCULATE THE CONDENSATE INVENTORY REQUIRED TO REMOVE DECAY HEAT AND RCP HEAT	
STEP 1: REVIEW applicable procedure step. STANDARD: **REFER** to 2-EOP-15, Section 4.6, Step 33. **EXAMINER'S NOTE:** • **PROVIDE 2-EOP-15, Functional Recovery** • **After the candidate identifies need, PROVIDE the 2-EOP-99 Figures package (Data Sheet 1, Figures 3 and 4)** COMMENTS:	_____ SAT _____ UNSAT
STEP 2: RECORD the current CST level. STANDARD: **ENTER** 23.5' (from the Initial Conditions) on the "Current CST level" line. COMMENTS:	_____ SAT _____ UNSAT

STEP 3:	DETERMINE the number of feet of CST needed to cooldown from present RCS temperature to 300 °F from Figure 4 and record.	
STANDARD:	**INTERPRET** Figure 4 by using 535 °F and the 300 °F line and **RECORD** ≤ 7.1 feet but ≥ 6.8 feet on the "Figure 4 Value" line.	_____ SAT
COMMENTS:		_____ UNSAT
STEP 4:	SUBTRACT Figure 4 value from the current CST level to obtain inventory available for RCS cooldown.	
STANDARD:	**CALCULATE** and **RECORD** ≥ 16.4 feet but ≤ 16.7 feet on the "Available CST level" line.	_____ SAT
COMMENTS:		_____ UNSAT

STEP 5:	UTILIZE the available CST level value from above and determine the time until SDC entry conditions are required using Figure 3.	**CRITICAL STEP**
STANDARD:	**RECORD** a value ≥ 13 hours but ≤ 17 hours on the "Time until SDC entry is required" line.	_____ SAT
EXAMINER'S NOTE:	**A wide acceptable range is provided because the candidate may NOT interpolate between the 0 and 4 hours "Time After Shutdown" lines, instead using the conservative "0 hours" line.**	_____ UNSAT
EXAMINER'S CUE:	**When Data Sheet 1 is handed to the Unit Supervisor, STATE: "This JPM is complete."**	
COMMENTS:		
END OF TASK		

STOP TIME: _____

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

- A Unit 2 reactor trip occurred from 100% two (2) hours ago.
- The operating crew is performing 2-EOP-15, Functional Recovery, Section 4.6, RCS and Core Heat Removal.
- Neither Shutdown Cooling Pump is currently available but a cooldown to COLD SHUTDOWN will be required.
- Reactor Coolant System Tcold is **535°F.**
- #2 Condensate Storage Tank (CST) level is **23.5 feet.**

INITIATING CUES:

The Unit Supervisor has directed you to perform 2-EOP-15, Section 4.6, Step 33 – Evaluate Condensate Inventory, so that Work Control can be directed as to when to have at least one Shutdown Cooling Pump available.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

REVIEW REACTOR COOLANT SYSTEM WATER INVENTORY BALANCE SURVEILLANCE - UNIT 1

NRC A-2

Developed/Revised by: J. L. Lloyd 12/21/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Review Reactor Coolant System (RCS) water inventory balance surveillance – Unit 1.

Faulted JPM? No

Facility JPM #: 0821186A

K/A Rating(s): 2.2.12 (3.4)

Duty Area(s): N/A

Task Information: 07001045

Task Standard:

Errors identified/corrected and the correct Action Level identified.

Evaluation Location:

Simulator	In Plant	Lab	Other
			X

Performance Level:

Perform	Simulate	Discuss
X		

References:
- OP-1-0010125A, Surveillance Data Sheets, Revision 93

Validation Time: 14 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- Completed OP-1-0010125A, Surveillance Data Sheets, Data Sheet 1
- Calculator

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Review Reactor Coolant System (RCS) water inventory balance surveillance – Unit 1
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

- Unit 1 is at 100% power.
- 1C Charging Pump is cleared and tagged.
- The RCO has just completed OP-1-0010125A, Surveillance Data Sheets, Data Sheet 1 - Reactor Coolant System Water Inventory Balance.
- ERDADS is not available.

INITIATING CUES:

You are the Unit 1 Unit Supervisor. Review the completed Data Sheet 1, for approval. Assume that the recorded Initial and Final Conditions are correct. The "Charging Pump Change" data are the TOTALS over the entire surveillance period.

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

START TIME: _____

REVIEW A REACTOR COOLANT SYSTEM (RCS) WATER INVENTORY BALANCE SURVEILLANCE	
STEP 1: REVIEW completed Data Sheet 1. STANDARD: **EVALUATE** data and conditions for the surveillance. **EXAMINER'S CUE:** **PROVIDE handout (completed OP-1-0010125A, Data Sheet 1).** **EXAMINER'S NOTE:** **(The following JPM Performance Steps indicate only the procedure/calculation errors and SRO-level application of the procedure.)** COMMENTS:	_____ SAT _____ UNSAT
STEP 2: REVIEW completed Data Sheet 1. STANDARD: • **RECOGNIZE** on Step 2, Pzr Level – **sign** error makes "Total of identified and unidentified leakage" incorrect. • **CHANGE** to **+ sign,** re-calculates "Total of identified and unidentified leakage" and records as **134.5 gal.** **EXAMINER'S CUE:** **After the first error is discovered STATE: "One-line through any error, initial it, and make the correction."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 3:	REVIEW completed procedure.	**CRITICAL STEP**
STANDARD:	• **RECOGNIZE** on Step 4: Carry down corrected "Total of identified and unidentified leakage" as **134.5 gal.** • **RECALCULATE** "Total of unidentified leakage" and **RECORD** as **122.5 gal**.	_____ SAT _____ UNSAT
COMMENTS:		
STEP 4:	REVIEW completed procedure.	**CRITICAL STEP**
STANDARD:	• **CARRY DOWN** corrected "Total of unidentified leakage" as **122.5 gal.** • **DETERMINE** Elapsed time should be **150 minutes**, not 120 minutes. • **RECALCULATE** Identified leakage and **RECORD** as **.08 gpm**. • **RECALCULATE** Unidentified leakage and **RECORD** as **.82 gpm**.	_____ SAT _____ UNSAT
COMMENTS:		

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

STEP 5: DETERMINE required actions. STANDARD: • **DETERMINE** leakage **within** Technical Specification limits. • **DETERMINE Action Level 2 applies** (Perform Action Level 1 actions, notify Engineering Manager). **EXAMINER'S CUE:** **ACKNOWLEDGE report as Shift Manager and/or Engineering Manager.** **EXAMINER'S NOTE:** **After the Technical Specification and Action level determination is complete STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	**CRITICAL STEP** _____ SAT _____ UNSAT

STOP TIME: _____

N/A

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

- Unit 1 is at 100% power.
- 1C Charging Pump is cleared and tagged.
- The RCO has just completed OP-1-0010125A, Surveillance Data Sheets, Data Sheet 1 - Reactor Coolant System Water Inventory Balance.
- ERDADS is not available.

INITIATING CUES:

You are the Unit 1 Unit Supervisor. Review the completed Data Sheet 1, for approval. Assume that the recorded Initial and Final Conditions are correct. The "Charging Pump Change" data are the TOTALS over the entire surveillance period.

FPL

Reminder to the TPE Evaluator Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

GIVEN A SET OF CONDITIONS, CALCULATE STAY TIME AND APPLY FACILITY EMERGENCY DOSE LIMITS

NRC A-3

Developed/Revised by: J. L. Lloyd 12/21/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Calculate stay time and apply facility emergency dose limits.

Faulted JPM? No

Facility JPM #: Modified

K/A Rating(s): 2.3.1 (3.0)

Duty Area(s): N/A

Task Information: None

Task Standard:

Applicable limit, stay time, and manpower determined correctly.

Evaluation Location:

Simulator	In Plant	Lab	Other
			X

Performance Level:

Perform	Simulate	Discuss
X		

References:
- EPIP-02, Duties and Responsibilities of the Emergency Coordinator, Revision 19A

Validation Time: 13 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- Calculator
- EPIP-02, Duties and Responsibilities of the Emergency Coordinator (including Attachments)

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- N/A

Radiological Protection and RWP Requirements:
- N/A

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Given a Set of Conditions, Calculate Stay Time and Apply Facility Emergency Dose Limits.
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

- A LOCA occurred on Unit 2. A prolonged loss of ECCS flow resulted in significant core damage.
- ECCS flow has been restored but radiation levels inside containment and in the RAB are very high.
- An uncontrolled radiological release is in progress via a leaking pipe in the RAB.
- The leak can be isolated by closing two manual valves in an area with a general external radiation level of 200 REM/hour.
- The Operations Support Center Coordinator recommends a "tag-team approach" for closing the two isolation valves and estimates that each valve could take as long as 12 minutes to access and close.

INITIATING CUES:

You are the Emergency Coordinator. Determine the number of operators that will be required to close both valves. Assume there is no internal hazard in the area where the valves will be operated, all of the time will be spent in the 200 REM/hr field and each person will get the maximum allowable dose.

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

START TIME: _____

GIVEN A SET OF CONDITIONS, CALCULATE STAY TIME AND APPLY FACILITY EMERGENCY DOSE LIMITS	
STEP 1: REFER to procedure. STANDARD: **DETERMINE** EPIP-02 applies and **REFER** to Attachment 5. **EXAMINER'S CUE:** **PROVIDE a copy of EPIP-02, including Attachment 5.** COMMENTS:	_____ SAT _____ UNSAT
STEP 2: DETERMINE the applicable dose limit. STANDARD: **DETERMINE 25 Rem** limit applies in accordance with Attachment 5. COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 3: CALCULATE stay time before applicable dose limit is exceeded. STANDARD: **CALCULATE** 25/200 = (.125)(60 minutes) = **7.5 minutes/person.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

STEP 4:	DETERMINE number of people required to close both valves.	**CRITICAL STEP**
STANDARD:	**DETERMINE** (12 minutes/valve)(2 valves)/7.5 minutes/person = **>3 or 3 at the limit and a 4th with a partial exposure.**	_____ SAT
EXAMINER'S CUE:	**After the number of people required for performing the task is specified, STATE: "This JPM is complete."**	_____ UNSAT
COMMENTS:		
END OF TASK		

STOP TIME: _____

N/A

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

- A LOCA occurred on Unit 2.
- A prolonged loss of ECCS flow resulted in significant core damage.
- ECCS flow has been restored but radiation levels inside containment and in the RAB are very high.
- An uncontrolled radiological release is in progress via a leaking pipe in the RAB.
- The leak can be isolated by closing two manual valves in an area with a general external radiation level of 200 REM/hour.
- The Operations Support Center Coordinator recommends a "tag-team approach" for closing the two isolation valves and estimates that each valve could take as long as 12 minutes to access and close.

INITIATING CUES:

You are the Emergency Coordinator. Determine the number of operators that will be required to close both valves. Assume there is no internal hazard in the area where the valves will be operated, all of the time will be spent in the 200 REM/hr field and each person will get the maximum allowable dose.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

EVALUATE A CHANGE IN PLANT CONDITIONS AND INITIATE ACTIONS TO RECLASSIFY AN EVENT

NRC A-4

Developed/Revised by: J. L. Lloyd 12/21/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: 09203240

Faulted JPM? No

Facility JPM #: New

K/A Rating(s): 2.4.41 (4.1)

Duty Area(s): N/A

Task Information: None

Task Standard:

General emergency declared and critical items on EPIP-08, ATTACHMENT 1 completed correctly.

Evaluation Location:				**Performance Level:**		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
			X	X		

References:
- EPIP-01, Classification of Emergencies, Revision 10A
- EPIP-02, Duties and Responsibilities of the Emergency Coordinator, Revision 19A
- EPIP-08, Off-site Notifications and Protective Action Recommendations, Revision 10

Validation Time: 14 minutes **Time Critical:** **NO***

***The notification time limit is not applied as CRITICAL since the JPM will be terminated before the FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM is fully completed.**

Tools/Equipment/Procedures Needed:
- EPIP-01, Classification of Emergencies
- EPIP-02, Section 5.6 (General Emergency Declaration Checklist)
- The following attachments from EPIP-08:
- Appendix A – Notifications From the Affected Control Room
- Attachment 1 – Florida Nuclear Plant Emergency Notification Form
- Attachment 1A – Directions for completing the Florida Nuclear Plant Emergency Notification Form
- Attachment 2 – Determination of PARs

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- N/A

Radiological Protection and RWP Requirements:
- N/A

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Evaluate a Change in Plant Conditions and Initiate Actions to Reclassify an Event.
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

- A LOCA has occurred on Unit 2.
- A Site Area Emergency (SAE) has been declared per EPIP-01, Classification of Emergencies, Attachment 1 – Emergency Classification Table.
- Initial notifications are complete.
- The TSC and EOF are manning but have NOT activated.
- After the SAE declaration, ECCS component failures resulted in a significant safety injection flow reduction.
- There is neither OPEN nor SHUT indication for Continuous Containment Purge Makeup Valves FCV-25-26 and FCV-25-36. The US has reported that the operating crew is assuming both valves are partially open.
- Health Physics has just reported measured radiation levels of 35% Derived Airborne Concentration (DAC) outside the Unit 2 Aux Building.
- Chemistry has just completed analyzing RCS samples and has reported that DEQ 1-131 is 421 uCi/mL.

INITIATING CUES:

Perform the actions required of the Emergency Coordinator, in accordance with EPIPs, to evaluate and reclassify this event.

START TIME: _____

EVALUATE A CHANGE IN PLANT CONDITIONS AND INITIATE ACTIONS TO RECLASSIFY AN EVENT	
STEP 1: EVALUATE the impact of changing condition(s). STANDARD: **REFER** to EPIP-01, Attachment 1. **DETERMINE** upgrade to **GENERAL EMERGENCY** based on 1.D.2 (also potentially addressed by 14.D). COMMENTS:	**CRITICAL TASK** _____ SAT _____ UNSAT
STEP 2: REFER to EPIP-02, Duties and Responsibilities of The Emergency Coordinator STANDARD: **DETERMINE** Section 5.6 applies. **EXAMINER'S CUE:** **PROVIDE EPIP-02, Section 5.6 and STATE: "For the purposes of the JPM, assume that Steps 1 through 13 have been completed. Begin at Step 14."** COMMENTS:	_____ SAT _____ UNSAT

STEP 3:	EVALUATE the instructions of EPIP-02, Step 14.	
STANDARD:	**DETERMINE** EPIP-08, Appendix A applies (Notifications From the Affected Control Room) and **INITIATE** completion of the **Florida Nuclear Plant Emergency Notification Form** (Attachment 1) in accordance with Attachment 1A, Directions for Completing the Florida Nuclear Plant Emergency Notification Form.	_____ SAT _____ UNSAT
EXAMINER'S CUE:	**PROVIDE EPIP-08 Appendix A, Attachment 1, Attachment 1A, and Attachment 2 as a reference package.**	
COMMENTS:		

STEP 4:	**COMPLETE** EPIP-08, Attachment 1 per Attachment 1A instructions.	**CRITICAL STEP**
STANDARD:	**CHECK** Block 1.B – THIS IS AN EMERGENCY.	_____ SAT
	Block 2 – (Entry not required for this JPM)	_____ UNSAT
	CHECK Block 3.C – St. Lucie Unit 2.	
	CHECK Block 4.D – General Emergency. **(CRITICAL STEP)**	
	CHECK Block 5.A – Emergency Declaration and enters current date and time.	
	CHECK Block 6.A and enters EAL Number **1.D.2**.	
	Block 7 (Entry not required for this JPM).	
EXAMINER'S CUE:	**When Block 8 is reached REPORT: "Wind direction is from 175 degrees."**	
	Block 8A – **ENTER** 175 degrees (given in cue)	
	Block 8.B (Downwind Sectors Affected) – **ENTER R, A, B** per the Table in Attachment 1A. **(CRITICAL STEP)**	
	CHECK Block 9.B – Release Status: - **Is Occurring**. **(CRITICAL STEP)**	
EXAMINER'S CUE:	**When Block 10 is reached REPORT: "Dose projection calculations are not complete at this time."**	
	CHECK Block 10.A – Release Significance Category (at Site Boundary): Information not available at this time.	
	CHECK Block 11.B and enters the following in the table:	
	• 0-2 miles; NONE; ALL; NONE **(CRITICAL STEP)**	
	• 2-5 miles: NONE; R, A, B; ALL REMAINING **(CRITICAL STEP)**	
	• 5-10 miles: NONE; NONE; ALL **(CRITICAL STEP)**	
	Block 11.C (Consider issuance of K1) – **CHECK** YES per Attachment 1A instructions.	
EXAMINER'S CUE:	**After Block 11 has been completed STATE: "This JPM is complete."**	

STEP 4, CONTINUED COMMENTS: **END OF TASK**	

STOP TIME: _____

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

- A LOCA has occurred on Unit 2.
- A Site Area Emergency (SAE) has been declared per EPIP-01, Classification Of Emergencies, Attachment 1 – Emergency Classification Table.
- Initial notifications are complete.
- The TSC and EOF are manning but have NOT activated.
- After the SAE declaration, ECCS component failures resulted in a significant safety injection flow reduction.
- There is neither OPEN nor SHUT indication for Continuous Containment Purge Makeup Valves FCV-25-26 and FCV-25-36. The US has reported that the operating crew is assuming both valves are partially open.
- Health Physics has just reported measured radiation levels of 35% Derived Airborne Concentration (DAC) outside the Unit 2 Aux Building.
- Chemistry has just completed analyzing RCS samples and has reported that DEQ 1-131 is 421 uCi/mL.

INITIATING CUES:

Perform the actions required of the Emergency Coordinator, in accordance with EPIPs, to evaluate and reclassify this event.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

LOCALLY OPERATE A SG ATMOSPHERIC DUMP VALVE - UNIT 1

NRC P-1

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Locally Operate Atmospheric Dump Valve.

Faulted JPM? No

Facility JPM #: 0821053

K/A Rating(s): 035 G2.1.30 (3.9/3.4)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

This JPM is complete when HCV-08-2A has been locally throttled.

Evaluation Location:				**Performance Level:**		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
	X				X	

References:
- 1-EOP-99, "Appendices/Figures/Tables/Data Sheets," Appendix U, Local Operation of Unit 1 Atmospheric Dump Valves, Revision 30
- FPL Safety Handbook

Validation Time: 10 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- 1-EOP-99, "Appendices/Figures/Tables/Data Sheets," Appendix U, Local Operation of Unit 1 Atmospheric Dump Valves
- Two-way radio
- Gloves
- Flashlight / Laser pointer

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- Support Steel Obstructions
- Standard Personal Safety Equipment

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Locally Operate Atmospheric Dump Valve – Unit 1
- The performance level to be used for this JPM is Simulate.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

Unit 1 has just experienced a Loss of Offsite Power (LOOP), Instrument Air is unavailable and is not expected to be returned to service for several hours.

INITIATING CUES:

You are the RCO. The Unit Supervisor has directed you to take local, manual control of Atmospheric Dump Valve (ADV), HCV-08-2A, using the local handwheel as directed by the Control Room, in accordance with 1-EOP-99, Appendices/Figures/Tables/Data Sheets, Appendix U, Local Operation of Unit 1 Atmospheric Dump Valves.

START TIME: _____

1-EOP-99, "APPENDICES/FIGURES/TABLES/DATA SHEETS," APPENDIX U, OPERATE A SG ATMOSPHERIC DUMP VALVE – (UNIT 1)	
STEP 1: CLOSE local instrument air isolation to the ADV (V182127). STANDARD: **POSITION** V182127, INSTR AIR to HCV-08-2A (A Train ADV) clockwise until CLOSED. **EXAMINER'S CUE:** **STATE: "V182127 indicates CLOSED."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 2: ESTABLISH communications with the Control Room. STANDARD: **CONTACT** the Control Room to ESTABLISH communications. **EXAMINER'S CUE:** **STATE: "Communication has been established. The Unit Supervisor directs you to THROTTLE HCV-08-2A two (2) turns OPEN."** COMMENTS:	_____ SAT _____ UNSAT

STEP 3: OPERATE HCV-08-2A using local handwheel as directed by the control room. STANDARD: **OPEN** HCV-08-2A by TURNING the handwheel two turns COUNTER-CLOCKWISE. **EXAMINER'S CUE:** **(After candidate simulates turning handwheel) STATE: "HCV-08-2A is two turns OPEN."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 4: NOTIFY the Control Room of throttling HCV-08-2A two turns. STANDARD: **NOTIFY** the Control Room of THROTTLING HCV-08-2A two turns. **EXAMINER'S CUE:** **STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	_____ SAT _____ UNSAT

STOP TIME: _____

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

Unit 1 has just experienced a Loss of Offsite Power (LOOP), Instrument Air is unavailable and is not expected to be returned to service for several hours.

INITIATING CUES:

You are the RCO. The Unit Supervisor has directed you to take local, manual control of Atmospheric Dump Valve (ADV), HCV-08-2A, using the local handwheel as directed by the control room, IAW 1-EOP-99, Appendices/Figures/Tables/Data Sheets, Appendix U, Local Operation of Unit 1 Atmospheric Dump Valves.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

START EDG 2B LOCALLY DURING SBO - UNIT 2

NRC P-2

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Start the 2B Diesel Generator locally during SBO.

Faulted JPM? YES

Facility JPM #: 0821072A

K/A Rating(s): 064 G2.1.30 (3.9/3.4)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

This JPM is complete when the 2B EDG is at rated frequency and voltage.

Evaluation Location:

Simulator	In Plant	Lab	Other
	X		

Performance Level:

Perform	Simulate	Discuss
	X	

References:
- 2-EOP-99, Appendices/Figures/Tables/Data Sheets, Appendix C, Diesel Generator Local Start, Revision 30

Validation Time: 15 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- 2-EOP-99, Appendices/Figures/Tables/Data Sheets, Appendix C, Diesel Generator Local Start

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Start the 2B Diesel Generator locally during SBO.
- The performance level to be used for this JPM is Simulate.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

Unit 2 is in a station blackout event. The plant is stable in a HOT STANDBY condition, and 2-EOP-10 is being implemented. 2B EDG did not automatically start and can NOT be manually started from the Control Room.

INITIATING CUES:

You are the Unit 2 SNPO. The Unit Supervisor has directed you to start the 2B EDG locally in accordance with 2-EOP-99, Appendices/Figures/Tables/Data Sheets, Appendix C.

START TIME: _____

2-EOP-99, APPENDICES/FIGURES/TABLES/DATA SHEETS, APPENDIX C, START 2B EDG LOCALLY DURING SBO – UNIT 2	
STEP 1: PLACE the EDG Output Breaker, NORMAL/ISOLATE switch in ISOLATE. STANDARD: **POSITION** Breaker 2-20401 Normal/Isolate isolation switch to ISOLATE. **EXAMINER'S CUE:** **(When candidate simulates turning switch) STATE: "Normal/Isolate Switch is in ISOLATE."** **EXAMINER'S NOTE:** **This breaker is in Reactor Auxiliary Building +43' Switchgear Room B.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 2: INVESTIGATE status of local alarm panel. STANDARD: **OBSERVE** local alarm panel status for any annunciators in alarm. **EXAMINER'S CUE:** **STATE: "There are NO local alarms."** COMMENTS:	_____ SAT _____ UNSAT

STEP 3: IF there are NO alarms present, THEN ENSURE BOTH overspeed trip levers are in the LATCHED position. STANDARD: **VERIFY** that engine overspeed trip latches on the 12- and 16-cylinder diesel engines are RESET (EACH latch is horizontal and each limit switch is set). **EXAMINER'S CUE:** **(After locating latches) STATE: "Both overspeed trip latches are HORIZONTAL and their respective limit switches are SET."** COMMENTS:	_____ SAT _____ UNSAT
STEP 4: ENSURE the lockout relay is RESET. STANDARD: **VERIFY** lockout relay is RESET, switch is vertical with no flag present and blue light is LIT. **EXAMINER'S CUE:** **STATE: "Lockout relay flag is BLACK, switch is VERTICAL, blue light is LIT."** COMMENTS:	_____ SAT _____ UNSAT
STEP 5: DEPRESS the emergency shutdown reset pushbutton. STANDARD: **DEPRESS** the emergency shutdown reset PUSHBUTTON. **EXAMINER'S CUE:** **STATE: "Pushbutton is DEPRESSED, Engine did NOT start."** **EXAMINER'S NOTE:** **This is a FAULTED step – EDG does NOT start.** COMMENTS:	**FAULTED STEP** _____ SAT _____ UNSAT

STEP 6: IF the EDG does NOT start, THEN PLACE the master control switch to START. STANDARD: **POSITION** master control switch to START. **EXAMINER'S CUE:** **STATE: "Master control switch is in START. Diesel did NOT start."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 7: IF the EDG still does NOT start, THEN PERFORM ALL of the following: • PLACE NORMAL/ISOLATE switches in ISOLATE. • Voltage Control STANDARD: **POSITION** SS-ISOL-2/1608, Voltage Control switch to ISO position. **EXAMINER'S CUE:** **STATE: "Switch is in the ISOLATE position."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 8: IF the EDG still does NOT start, THEN PERFORM ALL of the following: • PLACE NORMAL/ISOLATE switches in ISOLATE. • Frequency Control STANDARD: **POSITION** SS-ISOL-1/958, Frequency Control switch to ISO position. **EXAMINER'S CUE:** **STATE: "Switch is in the ISOLATE position."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 9: IF the EDG still does NOT start, THEN PERFORM ALL of the following: • PLACE NORMAL/ISOLATE switches in ISOLATE. • Start Circuit STANDARD: **POSITION** SS-ISOL-3/966, Start Circuit switch to ISO position. **EXAMINER'S CUE:** **STATE: "Switch is in the ISOLATE position."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 10: IF the EDG still does NOT start, THEN PERFORM ALL of the following: • DEPRESS the idle start pushbutton. STANDARD: **DEPRESS** and **RELEASE** the IDLE START pushbutton **EXAMINER'S CUE:** **STATE: "Diesel has STARTED and has accelerated to 450 rpm.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 11: IF the EDG still does NOT start, THEN PERFORM ALL of the following: • DEPRESS the idle release pushbutton. STANDARD: **DEPRESS** and **RELEASE** the IDLE RELEASE pushbutton. **EXAMINER'S CUE:** **STATE: "Diesel has accelerated to 900 rpm."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 12: IF the EDG still does NOT start, THEN PERFORM ALL of the following: • When the EDG reaches 900 rpm, Then PERFORM BOTH of the following: • ADJUST Voltage Control Switch to obtain 4160 volts. STANDARD: **OBSERVE** A.C. Voltmeter Gen. Voltage. **EXAMINER'S CUE:** **STATE: "Generator Voltmeter reads 4000 Volts."** COMMENTS:	_____ SAT _____ UNSAT
STEP 13: IF the EDG still does NOT start, Then PERFORM ALL of the following: • When the EDG reaches 900 rpm, Then PERFORM BOTH of the following: • ADJUST Voltage Control Switch to obtain 4160 volts. STANDARD: **ROTATE** the Voltage Control Switch to the RAISE position and **OBSERVE** A.C. Voltmeter Gen. voltage. **EXAMINER'S CUE:** **(After candidate simulates switch manipulation) STATE: "Generator voltage is 4160 volts."** COMMENTS:	**FAULTED STEP** _____ SAT _____ UNSAT

STEP 14: IF the EDG still does NOT start, Then PERFORM ALL of the following: • When the EDG reaches 900 rpm, Then PERFORM BOTH of the following: • ADJUST Governor Control Switch to obtain 60 hertz. STANDARD: **OBSERVE** Frequency meter. **EXAMINER'S CUE: STATE: "Diesel frequency is 59.8 hertz."** COMMENTS:	_____ SAT _____ UNSAT
STEP 15: IF the EDG still does NOT start, Then PERFORM ALL of the following: • When the EDG reaches 900 rpm, Then PERFORM BOTH of the following: • ADJUST Governor Control Switch to obtain 60 hertz. STANDARD: **ROTATE** the Electric GOV CTL Switch to the RAISE position and **OBSERVE** Frequency meter. **EXAMINER'S CUE: (After candidate simulates switch manipulation) STATE: "Generator frequency is 60 hertz."** COMMENTS:	**FAULTED STEP** _____ SAT _____ UNSAT

STEP 16: IF the EDG still does NOT start, THEN PERFORM ALL of the following: • PLACE NORMAL/ISOLATE switches in NORMAL. • Voltage Control STANDARD: **POSITION** Voltage Control switch to NORM position. **EXAMINER'S CUE:** **(After candidate simulates switch manipulation) STATE: "Switch is in NORMAL."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 17: IF the EDG still does NOT start, THEN PERFORM ALL of the following: • PLACE NORMAL/ISOLATE switches in NORMAL. • Frequency Control STANDARD: **POSITION** Frequency Control switch to NORMAL position. **EXAMINER'S CUE:** **(After candidate simulates switch manipulation) STATE: "Switch is in NORMAL."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 18: IF the EDG still does NOT start, THEN PERFORM ALL of the following: • PLACE NORMAL/ISOLATE switches in NORMAL. • Start Circuit. STANDARD: **POSITION** Start Circuit switch to NORM position. **EXAMINER'S CUE:** **(After candidate simulates switch manipulation) STATE: "Switch is in NORMAL."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 19: VERIFY the EDG is operating normally. STANDARD: **VERIFY** normal operating CONDITIONS by **OBSERVING** diesel parameters. **EXAMINER'S CUE:** **(If asked for parameters) STATE: "Frequency is 60 Hertz and voltage is 4160 volts. No alarms are present."** COMMENTS:	_____ SAT _____ UNSAT

STEP 20: WHEN instructed by the Control Room, THEN PLACE the EDG Output Breaker NORMAL/ISOLATE switch to NORMAL. STANDARD: **WHEN** instructed by the Control Room, PLACE the EDG Output Breaker NORMAL/ISOLATE switch to NORMAL. **EXAMINER'S CUE:** **(When the candidate reaches this step) STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	_____ SAT _____ UNSAT

STOP TIME: _____

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

Unit 2 is in a station blackout event. The plant is stable in a HOT STANDBY condition, and 2-EOP-10 is being implemented. 2B EDG did not automatically start and can NOT be manually started from the Control Room.

INITIATING CUES:

You are the Unit 2 SNPO. The Unit Supervisor has directed you to start the 2B EDG locally in accordance with 2-EOP-99, Appendices/Figures/Tables/Data Sheets, Appendix C.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

HYDROGEN PURGE SYSTEM OPERATION – UNIT 1

UNIT 1 RAB 43" FAN ROOM

NRC P-3

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Hydrogen Purge System Operation – Unit 1

Faulted JPM? NO

Facility JPM #: 0821098

K/A Rating(s): 028 G2.1.30 (3.9/3.4)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

This JPM is complete when the Hydrogen Purge System is in operation with a 100 CFM flowrate established.

Evaluation Location:				Performance Level:		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
	X				X	

References:
- 1-EOP-99, Appendices/Figures/Tables/Data Sheets, Appendix N, Hydrogen Purge System Operation, Revision 30

Validation Time: 20 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- 1-EOP-99, Appendix N, Hydrogen Purge System Operation,
- Key for Purge Valve Room on 19.5' elevation

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Hydrogen Purge System Operation – Unit 1
- The performance level to be used for this JPM is Simulate.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

The Unit is engaged in mitigating a LOCA. SIAS has been reset and HVE-10B is running. The Technical Support Center and Chemistry have given permission to place the Hydrogen Purge System in operation to ventilate the Containment.

INITIATING CUES:

You are the SNPO. You have been directed by the Unit Supervisor to locally operate the Hydrogen Purge system in accordance with 1-EOP-99, Appendix N. Establish a 100 CFM flowrate using HVE-7B.

NOTE TO EXAMINER:

Initiating cue identifies candidate as SNPO. Since on-shift SNPO would have key for Purge Valve Room on 19.5' elevation, examiner will obtain key prior to start of JPM and give to student when discussing tools needed for this task.

START TIME: _____

1-EOP-99, APPENDICES/FIGURES/TABLES/DATA SHEETS, APPENDIX N, HYDROGEN PURGE SYSTEM OPERATION	
STEP 1: ENSURE **ONE** RAB Main Exhaust Fan HVE-10A (B) is RUNNING, if available. STANDARD: **DETERMINE** HVE-10B is running from Initial Conditions provided. **EXAMINER'S CUE:** **(If asked) STATE: "HVE-10B is RUNNING."** COMMENTS:	_____ SAT _____ UNSAT
STEP 2: VERIFY LOCKED CLOSED V25015,Pen. P-58 to HVE-7A /7B Gate - Filter Bypass. STANDARD: **VERIFY** V25015, CNTMT Purge Exhaust Bypass HVE-7 Filter Isol is LOCKED CLOSED. **EXAMINER'S CUE:** **(After candidate locates valve) STATE: "Valve V25015 handwheel ROTATED until hard stop REACHED and LOCKED."** **EXAMINER'S NOTE:** **Penetration 58 is between filter train and containment wall.** COMMENTS:	_____ SAT _____ UNSAT

STEP 3: VERIFY LOCKED CLOSED V-25-16, Pen. P-58 to HVE-7A / 7B Gate - Filter Bypass. STANDARD: **VERIFY** V-25-16, PENETR P-58 TO HVE-7A & 7B GATE is LOCKED CLOSED. **EXAMINER'S CUE:** **(After candidate locates valve) STATE: "Valve V-25-16 handwheel ROTATED until hard stop REACHED and LOCKED."** **EXAMINER'S NOTE:** **Penetration 58 is between filter train and containment wall.** COMMENTS:	_____ SAT _____ UNSAT
STEP 4: CLOSE FCV-25-9, Pen. 57 to HVE-7 Intake. STANDARD: **DEPRESS** the CLOSE pushbutton for FCV-25-9, PENETR P-57 TO HVE-7 INTAKE until FCV-25-9 indicates CLOSED. **EXAMINER'S CUE:** **(After candidate simulates pressing pushbutton) STATE: "FCV-25-9 is CLOSED."** **EXAMINER'S NOTE:** **The pushbutton for FCV-25-9 is located inside Junction Box B1117 on the column south west of FCV-25-9.** **The valve position indicator is located on the outside cover of Junction Box B1117. Position indication can also be verified by using the dial indicator and mechanical pointer located on FCV-25-9.** COMMENTS:	_____ SAT _____ UNSAT

STEP 5: UNLOCK and OPEN V25013, Pen. 57 to HVE-7A / 7B Gate Suction. STANDARD: **UNLOCK** and **OPEN** V25013, CNTMT H_2 PURGE EXHAUST THRU HVE-7 FILTER ISOL. **EXAMINER'S CUE:** **(After candidate locates valve and simulates action) STATE: "You have UNLOCKED and ROTATED Valve V25013 handwheel counter-clockwise until hard stop REACHED."** **EXAMINER'S NOTE:** **Penetration 57 is between filter train and containment wall.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 6: UNLOCK and OPEN V-25-14, Pen. 57 to HVE-7A / 7B Gate Suction. STANDARD: **UNLOCK** and **OPEN** V-25-14, PENETR P-57 to HVE-7A & 7B GATE. **EXAMINER'S CUE:** **(After candidate locates valve and simulates action) STATE: "You have UNLOCKED and ROTATED Valve V-25-14 handwheel counter-clockwise until hard stop REACHED."** **EXAMINER'S NOTE:** **Penetration 57 is between filter train and containment wall** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 7: VERIFY V-25-18, HVE-7A / 7B Disch. Gate to SBVS, is CLOSED. STANDARD: **VERIFY** V-25-18, HVE-7A & HVE-7B DISCH GATE is CLOSED. **EXAMINER'S CUE:** **(After locating the valve and simulates action) STATE: "You have attempted to ROTATE the handwheel clockwise, but hard stop is immediately reached.** **EXAMINER'S NOTE:** **V-25-18 is located next to V-25-17 in overhead.** COMMENTS:	_____ SAT _____ UNSAT
STEP 8: OPEN V-25-17, HVE-7A/7B Disch. Gate to Vent Stack. STANDARD: **OPEN** V-25-17, HVE-7A & HVE-7B DISCH GATE. **EXAMINER'S CUE:** **(After candidate locates valve and simulates action) STATE: "You have ROTATED valve V-25-17 handwheel counter-clockwise until hard stop REACHED** **EXAMINER'S NOTE:** **Valve is above HVE-6B.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 9: UNLOCK and OPEN V25011, Makeup Air Before Pen. 56 Gate. (19.5' Elev.) STANDARD: **UNLOCK** and **OPEN** V25011, CNTMT H_2 PURGE MAKEUP AIR PRI ISOL. **EXAMINER'S CUE:** **(After candidate locates valve and simulates action) STATE: "You have UNLOCKED and ROTATED valve V25011 handwheel until hard stop REACHED."** **EXAMINER'S NOTE:** **Located in the Purge valve room, 19.5' between the RAB and Fuel Handling Bldg.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 10: UNLOCK and OPEN V-25-12, Makeup Air Before Pen. 56 Gate. (19.5' Elev.) STANDARD: **UNLOCK** and **OPEN** V-25-12, CNTMT H_2 PURGE MAKEUP AIR SEC ISOL. **EXAMINER'S CUE:** **(After candidate locates valve and simulates action) STATE: "You have UNLOCKED and ROTATED valve V-25-12 handwheel until hard stop REACHED."** **EXAMINER'S NOTE:** **Located in the Purge Valve Room, 19.5' between the RAB and Fuel Handling Bldg.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 11: ENSURE FCV-25-10, HVS-4 Plenum to HVE-7 Intake is THROTTLED OPEN. STANDARD: **PARTIALLY OPEN** FCV-25-10, HVS-4 PLENUM TO HVE-7 INTAKE. **EXAMINER'S CUE:** **(After candidate locates control) STATE: "FCV-25-10 has been throttled to 50% OPEN."** **EXAMINER'S NOTE:** **Control panel is located on column near north end of the 6A filter train.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 12: START **ONE** Hydrogen Purge Fan HVE-7A **OR** HVE-7B. STANDARD: **DEPRESS START** pushbutton for HVE-7B Post Accident Purge Fan and **VERIFY** red light illuminated. **EXAMINER'S CUE:** **(After candidate locates pushbutton and simulates action) STATE: "HVE-7B RED light ON, GREEN light OFF."** **EXAMINER'S NOTE:** **Control panel is located on column next to fans inside Cabinet B1240, Shield Bldg. Exh. Fan HVE-6B, Post Accident Hyd. Purge Fan HVE-7B.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 13: THROTTLE OPEN FCV-25-9, Pen. 57 to HVE-7 Intake, to obtain between 90 and 100 CFM on FR-25-1, Local Flow Recorder. STANDARD: **ADJUST** FCV-25-9 for desired flowrate of between 90 and 100cfm by **DEPRESSING** OPEN and CLOSE pushbutton inside B1117, Hydrogen Purge System Valve FCV-25-9. **EXAMINER'S CUE:** **(After candidate simulates action) STATE: "FR-25-1 INDICATES approximately 95cfm."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 14: MONITOR Points 3, 4, 5, and 6 on TR-25-2 in the Control Room. STANDARD: **NOTIFY** Control Room to monitor TR-25-2 as follows: ▪ Point 3, Before Hydrogen Purge Charcoal Absorber (TE-25-18). ▪ Point 4, Hydrogen Purge Charcoal Absorber (TE-25-19). ▪ Point 5, Hydrogen Purge Charcoal Absorber (TE-25-20). ▪ Point 6, After Hydrogen Purge Charcoal Absorber (TE-25-21). **EXAMINER'S CUE:** **STATE: "Control Room is MONITORING Points 3, 4, 5 and 6 on TR-25-2."** COMMENTS:	_____ SAT _____ UNSAT

STEP 15: ADJUST FCV-25-10 to maintain charcoal absorber temperature below alarm set point on TR-25-2. STANDARD: **DEPRESS OPEN** pushbutton on FCV-25-10, Hydrogen Purge System Valve inside B1137, Hydrogen Purge System Valve Cabinet to MAINTAIN temperature <190°F. **EXAMINER'S CUE:** **(When this step is reached) STATE: "The Control Room informs you that TR-25-2 is Indicating 190°F and rising. RCO directs you to ADJUST flow to MAINTAIN temperature at <190°F."** **(If asked, Alarm Setpoint is 190°F)** **EXAMINER'S CUE:** **(After OPEN Pushbutton DEPRESSED) STATE: "Control Informs you that TR-25-2 is INDICATING 175°F and Stable."** **EXAMINER'S NOTE:** **Located on the east side of the filter train, Indications by local TE: TI-25-HVE-7-1 and TI-25-HVE-7-2.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 16: MONITOR Plant Stack radiation levels and Containment hydrogen concentration during purge operation. STANDARD: **REQUEST** Control Room to MONITOR Eberline points for the Plant Vent Radiation Monitor. **EXAMINER'S CUE:** **(When this step is reached) STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	_____ SAT _____ UNSAT

STOP TIME: _____

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

The Unit is engaged in mitigating a LOCA. SIAS has been reset and HVE-10B is running. The Technical Support Center and Chemistry have given permission to place the Hydrogen Purge System in operation to ventilate the Containment.

INITIATING CUES:

You are the SNPO. You have been directed by the Unit Supervisor to locally operate the Hydrogen Purge system in accordance with 1-EOP-99, Appendix N. Establish a 100 CFM flowrate using HVE-7B.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

PERFORM STANDARD POST TRIP ACTIONS - UNIT 2

NRC S-1

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Perform Standard Post Trip Actions – Unit 2.

Faulted JPM? Yes

Facility JPM #: 0821069A

K/A Rating(s): 004 A4.18 (4.3/4.1)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

This JPM is complete when Reactivity Control is established by emergency boration contingency actions and the US is notified.

Evaluation Location:				Performance Level:		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
X				X		

References:
- 2-EOP-01, Standard Post Trip Actions Revision 24
- 2-ONP-02-2, Emergency Boration Revision 4

Validation Time: 8 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- 2-EOP-01, Standard Post Trip Actions, Revision 24
- 2-ONP-02.02, Emergency Boration, Revision 4

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Perform Standard Post Trip Actions – Unit 2.
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

SPECIFIC DIRECTS FOR SIMULATOR JPMs:

- All simulator JPM steps, including communications, shall be performed for this JPM.
- You are to operate any plant equipment that is necessary for the completion of this JPM.
- The simulator will provide the cues as you perform this JPM.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

A reactor trip on Unit 2 has just occurred following a 45-day run at 100% power.

INITIATING CUES:

You are the Board RCO. The Unit Supervisor has directed you to perform the Standard Post Trip Actions of 2-EOP-01, Standard Post Trip Actions.

JOB PERFORMANCE MEASURE
PERFORMANCE CHECKLIST

START TIME: _____

DETERMINE REACTIVITY CONTROL ACCEPTANCE CRITERIA COMPLETE:	
STEP 1: VERIFY Reactor power lowering. STANDARD: **VERIFY** reactor power is LOWERING using redundant indications and **OBSERVE** JI-001A/B/C/D, Wide Range Percent Power indications LOWERING and/or **OBSERVE** JR-001A/B/C/D, Wide Range Percent Power chart recorders LOWERING. **EXAMINER'S NOTE:** **During this scenario, an instructor should play the part of the Desk RCO and keep the annunciators acknowledged to allow the candidate to focus on the task at hand.** COMMENTS:	_____ SAT _____ UNSAT
STEP 2: VERIFY Startup Rate is negative. STANDARD: **VERIFY** startup rate is NEGATIVE using redundant indications and **OBSERVE** JK1-001A/B/C/D Startup Rate indications are NEGATIVE. COMMENTS:	_____ SAT _____ UNSAT

STEP 3: VERIFY a maximum of **ONE** CEA is NOT fully inserted. STANDARD: **USING** the Core Mimic CEA Display, Analog Display System CRT, and Control Element Drive System Control Panel, **DETERMINE** that CEAs 13, 37, and 45 are FULLY WITHDRAWN. **EXAMINER'S NOTE: Faulted Step, CEAs 13, 37, and 45 are FULLY WITHDRAWN.** COMMENTS:	**FAULTED STEP** _____ SAT _____ UNSAT
2-EOP-1, CONTINGENCY ACTION; INITIATE EMERGENCY BORATION TO ACHIEVE ADEQUATE SHUTDOWN MARGIN. ENTER 2-ONP-02.02, EMERGENCY BORATION.	
STEP 4: PLACE the Makeup Mode Selector switch in MANUAL. STANDARD: **POSITION** Makeup Mode Selector Switch to MANUAL. COMMENTS:	_____ SAT _____ UNSAT
STEP 5: ENSURE V2525, Boron Load Control Valve, is CLOSED. STANDARD: **ENSURE** V2525, Boron Load Control Valve is CLOSED and **OBSERVE** green CLOSE light illuminated. COMMENTS:	_____ SAT _____ UNSAT

STEP 6: START 2A or 2B BA Pump. STANDARD: **POSITION** 2A or 2B BAM Pump control switch to RUN and **OBSERVE** red START light illuminated. **EXAMINER'S NOTE: Since the procedure doesn't specify which pump to run, either one is acceptable. Optimally, however, the candidate should start the pump associated with the Tech Spec designated BAM tank.** COMMENTS:	_____ SAT _____ UNSAT
STEP 7: CLOSE V2650, Tank 2A Recirc. Valve. STANDARD: **POSITION** V2650, Tank 2A Recirc Valve control switch to CLOSE and **OBSERVE** green CLOSE light illuminated. COMMENTS:	_____ SAT _____ UNSAT
STEP 8: CLOSE V2651, Tank 2B Recirc Valve. STANDARD: **POSITION** V2651 Tank 2B Recirc Valve control switch to CLOSE and **OBSERVE** green CLOSE light illuminated. COMMENTS:	_____ SAT _____ UNSAT

STEP 9: OPEN V2514 Emergency Borate. STANDARD: **POSITION** V2514, Emergency Borate control switch to OPEN and **OBSERVE** that valve does NOT OPEN. **EXAMINER'S NOTE: Faulted step – V2514 failed to open.** COMMENTS: Valve Begins to open and Valve trips	**FAULTED STEP** _____ SAT _____ UNSAT
STEP 10: OPEN V2508, BA Gravity Feed B. STANDARD: **POSITION** V2508, BA Gravity Feed B control switch to OPEN and **OBSERVE** red OPEN light illuminated. COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 11: OPEN V2509, BA Gravity Feed A. STANDARD: **POSITION** V2509, BA Gravity Feed B control switch to OPEN and **OBSERVE** red OPEN light illuminated. COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 12: CLOSE V2501 VCT Outlet Valve. STANDARD: **POSITION** V2501, VCT Outlet Valve control switch to CLOSE and **OBSERVE** green CLOSE RESET light illuminated. COMMENTS:	_____ SAT _____ UNSAT
STEP 13: IF VCT level is greater than 5%, **THEN PLACE** and hold V2501 in the **CLOSE** position. STANDARD: **POSITION** V2501, VCT Outlet Valve switch to CLOSE and **HOLD** in CLOSE position. COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 14 OPEN Breaker 2-42118, power to valve V2501, at MCC-2B6. STANDARD: **PAGE** and **DIRECT** SNPO to open Breaker 2-42118. **HOLD** V2501 control switch in the CLOSE position until both red and green lights extinguish. **EXAMINER'S CUE:** **STATE: "SNPO has ACKNOWLEDGED and is proceeding to OPEN Breaker 2-42118."** **EXAMINER'S NOTE:** **After SNPO opens breaker, then V2501 shows GREEN light OFF, RED light OFF.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 15: NOTIFY the US that Reactivity Control criteria is complete. STANDARD: **NOTIFY** US that Reactivity Control has been verified and is being met with Emergency Boration is in progress. **EXAMINER'S CUE: STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	_____ SAT _____ UNSAT

STOP TIME: _____

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

1. **RESTORE** IC-1, 100% power, MOL.
2. **UNFREEZE** simulator.
3. **SELECT** JPM Lesson File Folder and OPEN File 0821069.
4. **EXECUTE** Lesson 0821069.
5. **TRIGGER Step 1 to stick out 3 CEAs and fail V2514.**
6. **TRIGGER** Step 9 for reactor trip. The simulator will automatically freeze after 10 seconds.
7. **MAKE** a SNAPSHOT if more than one student will be performing the JPM.
8. **UNFREEZE** the simulator when the student is ready. The audible alarms will be reinstated when the simulator is unfrozen.
9. **TRIGGER Step 2 to open the breaker for V2501 when paged by the candidate.**

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

A reactor trip on Unit 2 has just occurred following a 45-day run at 100% power.

INITIATING CUES:

You are the Board RCO. The Unit Supervisor has directed you to perform the Standard Post Trip Actions of 2-EOP-01, Standard Post Trip Actions.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

ESTABLISH ONCE–THROUGH COOLING - UNIT 2

NRC S-2

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Establish Once-Through Cooling on Unit 2

Faulted JPM? Yes

Facility JPM #: 0821037A

K/A Rating(s): 006 A4.07 (4.4/4.4)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

This JPM is complete when once-through cooling has been established and safety injection flow to the RCS has been verified and US has been informed that the task is complete, including contingency actions.

Evaluation Location:				Performance Level:		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
X				X		

References:
- 2-EOP-15, Functional Recovery, RCS and Core Heat Removal, Success Path 3, Revision 28
- 2-EOP-99, Appendices/Figures/Tables/Data Sheets, Figure 2, RCS Pressure Temperature, Revision 30

Validation Time: 10 minutes **Time Critical:** No

Tools/Equipment/Procedures Needed:
- 2-EOP-15, Functional Recovery, RCS and Core Heat Removal, Success Path 3
- 2-EOP-99, Figure 2, RCS Pressure Temperature
- RTGB Keys, 21 and 22

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Establish Once-Through Cooling on Unit 2.
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

SPECIFIC DIRECTS FOR SIMULATOR JPMs:

- All simulator JPM steps, including communications, shall be performed for this JPM.
- You are to operate any plant equipment that is necessary for the completion of this JPM.
- The simulator will provide the cues as you perform this JPM.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

Unit 2 is experiencing a total loss of feedwater event. All attempts to restore main and auxiliary feedwater have been unsuccessful, and both steam generator levels indicate less than 15% wide range. The Unit Supervisor has directed that once-through cooling be established.

INITIATING CUES:

You are the Desk RCO. The Unit Supervisor has directed you to establish one-through cooling in accordance with 2-EOP-15, RCS and Core Heat Removal, Success Path 3, Steps 1 and 2.

JOB PERFORMANCE MEASURE
PERFORMANCE CHECKLIST

START TIME: _____

2-EOP-15, FUNCTIONAL RECOVERY, RCS & CORE HEAT REMOVAL, SUCCESS PATH 3, ESTABLISH ONCE-THROUGH COOLING	
STEP 1: DE-ENERGIZE **ALL** Pressurizer Heaters. STANDARD: **POSITION** both PZR Proportional Heater Control Switches P-1 and P-2 and all Backup Heater control switches B-1, 2, 3, 4, 5, and 6 to OFF. **EXAMINER'S NOTE:** **Both Proportional Heaters and Backup Heaters B3 and B5 are ON. Depressurization in subsequent steps will cause additional heaters to start if switches are not placed in OFF.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 2: IF Main Condenser is available, THEN **BLOCK MSIS** STANDARD: **DETERMINE** that Main Condenser is AVAILABLE by **OBSERVING** Condenser backpressure indication (PI-10-6) and MSIVs OPEN. **INSERT** MSIS Block Channel A Key #21 and Block Channel B Key #22 into respective switches and **BLOCK** MSIS when Block Permissive is RECEIVED. **EXAMINER'S NOTE:** **Either JPM Steps 2 and 3 (dumping steam to condenser) OR Step 4 (dumping steam to atmosphere) must be accomplished in order for CRITICAL ACTION to be met.** **SBCS valves must be opened in the next step to reduce SG Pressure for the MSIS Block Permissive.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 3: IF Main Condenser is available, THEN ENSURE ALL Steam Bypass Valves are OPEN.	**CRITICAL STEP**
STANDARD: **OPEN all Steam Bypass Valves** by performing the following: For PCV-8801, **DEPRESS** yellow MANUAL pushbutton then **DEPRESS** yellow OPEN pushbutton. For PCV-8802, **DEPRESS** yellow MANUAL pushbutton then **DEPRESS** yellow OPEN pushbutton. For PCV-8803, **DEPRESS** yellow MANUAL pushbutton then **DEPRESS** yellow OPEN pushbutton. For PCV-8804, **DEPRESS** yellow MANUAL pushbutton then **DEPRESS** yellow OPEN pushbutton. For PCV-8805, **DEPRESS** yellow MANUAL pushbutton then **DEPRESS** yellow OPEN pushbutton. **OBSERVE** all Steam Bypass Valves red OPEN lights illuminated.	_____ SAT _____ UNSAT
EXAMINER'S NOTE: **Either JPM Steps 2 and 3 (dumping steam to condenser) OR Step 4 (dumping steam to atmosphere) must be accomplished in order for CRITICAL ACTION to be met.** **SBCS valves must be opened to reduce SG Pressure for the MSIS Block Permissive.**	
COMMENTS:	

STEP 4: ENSURE **ALL** available Atmospheric Dump Valves are OPEN. STANDARD: **POSITION all four ADVs to OPEN** by any of the following methods: ▪ ADV control switches in MANUAL and OPEN. ▪ ADV controller in "M" mode with MANUAL output at 100%. ▪ ADV controller in "A" mode with SETPOINT set to 0. MV-08-18A, 2A S/G Atmos Dump VLV MV-08-19B, 2B S/G Atmos Dump VLV MV-08-18B, 2A S/G Atmos Dump VLV MV-08-19A, 2B S/G Atmos Dump VLV **EXAMINER'S NOTE:** **Either JPM Steps 2 and 3 (dumping steam to condenser) OR Step 4 (dumping steam to atmosphere) must be accomplished in order for CRITICAL ACTION to be met.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 5: ENSURE **ALL** RCPs are STOPPED. STANDARD: **DETERMINE** that all RCPs are stopped and **OBSERVE** green STOP lights illuminated and RCP ammeters AM 101, 109, 105 and 113 indicating zero amps. COMMENTS:	_____ SAT _____ UNSAT

STEP 6: ENSURE SIAS and CIAS are ACTUATED. STANDARD: **DEPRESS** "THINK" pushbutton above each switch and **POSITION** SIAS Train A and Train B actuation switches to SIAS ON. (If CIAS did not automatically actuate on SIAS, **DEPRESS** "THINK" pushbutton above each switch and **POSITION** CIAS Train A and Train B actuation switches to CIAS ON.) **EXAMINER'S NOTE:** **HCV-3627 fails to auto open, and HPSI Pump 2B fails to auto start.** **SIAS and CIAS may AUTO actuate prior to MANUAL Actuation** COMMENTS:	_____ SAT _____ UNSAT
STEP 7A: ENSURE **BOTH** of the HPSI pumps are RUNNING. STANDARD: **DETERMINE** that HPSI Pump 2A is running and **OBSERVE** red START light illuminated and normal pump amperage. **DETERMINE** HPSI Pump 2B **failed to START**. **POSITION HPSI Pump 2B control switch to START.** **DETERMINE** that HPSI Pump 2B is running and **OBSERVE** red START light illuminated and normal pump amperage. **EXAMINER'S NOTE:** **Faulted step: HPSI Pump 2B failed to auto start.** COMMENTS:	**FAULTED STEP** _____ SAT _____ UNSAT

STEP 7B: ENSURE **ALL** cold leg injection valves are **OPEN.** STANDARD: **VERIFY** that all cold leg injection valves are OPEN **DETERMINE** HCV-3627, Header A to Loop 21A **failed to OPEN.** **POSITION HCV-3627, Header A to Loop 21A Valve to OPEN** and **OBSERVE** the red OPEN light illuminated. **EXAMINER'S NOTE:** **Faulted step, HCV-3627 failed to auto open.** COMMENTS:	**FAULTED STEP** _____ SAT _____ UNSAT
STEP 8: ENSURE **ALL** available charging pumps are RUNNING. STANDARD: **DETERMINE** 2A and 2B charging pumps are running and **OBSERVE** red ON lights illuminated. **POSITION 2C charging pump control switch to START.** **DETERMINE** 2C charging pump is running by **OBSERVING** red ON light illuminated. **EXAMINER'S NOTE:** **2C Charging PP must be manually STARTED.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 9:	ENSURE **BOTH** PORV block valves are OPEN.	**CRITICAL STEP**
STANDARD:	**POSITION PORV block valve V1477 control switch to OPEN (V1476 was already open)** and **OBSERVE** the red OPEN lights illuminated and the green CLOSE lights extinguished for both.	_____ SAT
COMMENTS:		_____ UNSAT
STEP 10A:	When at least **ONE** HPSI pump is RUNNING with a cold leg flowpath and **BOTH** PORV block valves are open, Then OPEN **BOTH** PORVs. 1. ENSURE PORV control switches are in OFF.	_____ SAT
STANDARD:	**VERIFY** V1474 and V1475, PORV control switches are in OFF.	_____ UNSAT
COMMENTS:		
STEP 10B:	When at least **ONE** HPSI pump is RUNNING with a cold leg flowpath and **BOTH** PORV block valves are open, Then OPEN **BOTH** PORVs. 2. **PULL at least TWO RPS Hi Pzr Press bistables.**	**CRITICAL STEP** _____ SAT
STANDARD:	**UNFASTEN** and **PULL** any two of four HI PZR PRESS trip unit bistables on RPS Cabinets.	_____ UNSAT
COMMENTS:		

STEP 10C:	When at least **ONE** HPSI pump is RUNNING with a cold leg flowpath and **BOTH** PORV block valves are open, Then OPEN **BOTH** PORVs. 3. VERIFY **BOTH** PORVs OPEN. STANDARD: **DETERMINE** both PORVs are OPEN and **OBSERVE** V1474 and V1475 red OPEN lights illuminated. COMMENTS:	_____ SAT _____ UNSAT
STEP 11A	When once-through cooling has been established, Then: 1. **CLOSE Atmospheric Dump Valves.** STANDARD: **POSITION** the Atmospheric Dump Valve control switches to CLOSE and **OBSERVE** the green CLOSE lights illuminated: MV-08-18A, 2A S/G Atmos Dump VLV. MV-08-19B, 2B S/G Atmos Dump VLV. MV-08-18B, 2A S/G Atmos Dump VLV. MV-08-19A, 2B S/G Atmos Dump VLV. COMMENTS:	_____ SAT _____ UNSAT

STEP 11B:	When once-through cooling has been established, Then: 2. **CLOSE Main Steam Isolation Valves.** STANDARD: **POSITION** the Main Steam Isolation Valve control switches to CLOSE and **OBSERVE** the green CLOSE lights illuminated: HCV-08-1A, Main Stm Hdr Isolation Valve A HCV-08-1B, Main Stm Hdr Isolation Valve B COMMENTS:	_____ SAT _____ UNSAT
STEP 11C:	When once-through cooling has been established, Then: 3. CLOSE Main Steam Isolation Bypass Valves. STANDARD: **VERIFY** the Main Steam Isolation Bypass Valve are CLOSED and **OBSERVE** the green CLOSED lights illuminated: COMMENTS:	_____ SAT _____ UNSAT

STEP 11D: When once-through cooling has been established, Then: 4. CLOSE Steam Generator Blowdown Isolation Valves. STANDARD: **VERIFY** the Steam Generator Blowdown Isolation Valve are CLOSED and **OBSERVE** the green CLOSE lights illuminated: **EXAMINER'S NOTE:** **Blowdown valves were closed during EOP-06 implementation.** COMMENTS:	_____ SAT _____ UNSAT
STEP 11E: When once-through cooling has been established, Then: 5. VERIFY Steam Generator Safety Valves are CLOSED. STANDARD: **DISPATCH** the SNPO to verify locally that the Steam Generator Safety Valves are CLOSED. **EXAMINER'S CUE:** **If directed, STATE: "The SNPO has been dispatched to verify the safeties are closed."** COMMENTS:	_____ SAT _____ UNSAT

STEP 12: If Steam Generator pressure approaches 985 psig (1000 psig), Then OPERATE ADVs as necessary to maintain S/G pressure between 835 and 915 psig (850 and 930 psig). STANDARD: **OBSERVE** and **MAINTAIN** Steam Generator pressure between 835 and 915 psig (850 and 930 psig). **EXAMINER'S NOTE: Steam Generators have been depressurized to establish Once-Through Cooling.** COMMENTS:	_____ SAT _____ UNSAT
STEP 13A: MAXIMIZE SI Flow. 1. ENSURE **ALL** available SI Pumps are RUNNING. STANDARD: **DETERMINE** that both HPSI pumps are RUNNING and **OBSERVE** HPSI Pumps 2A and 2B red ON lights illuminated and green OFF lights extinguished. COMMENTS:	_____ SAT _____ UNSAT

STEP 13B: MAXIMIZE SI Flow. 2. VERIFY adequate SI flow. **REFER TO** Figure 2, Safety Injection Flow vs. RCS Pressure. STANDARD: **SUM** Safety Injection Flows on FI-3311/3321/3341 and **VERIFY** total flow is to RIGHT of "2 Full Trains in Operation" curve on Figure 2 in 2-EOP-99. COMMENTS:	_____ SAT _____ UNSAT
STEP 13C: MAXIMIZE SI Flow. 3. ENSURE **ALL** available Charging Pumps are RUNNING. STANDARD: **VERIFY** all available charging pumps are RUNNING and **OBSERVE** charging pump 2A, 2B and 2C red ON lights illuminated and green OFF lights extinguished. **EXAMINER'S CUE:** **After Charging Pumps are checked, STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	_____ SAT _____ UNSAT

STOP TIME: _____

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

1. **RESTORE** IC-40 from the JPM IC Set Group.
2. **DO NOT UNFREEZE** simulator.
3. **SELECT** JPM Lesson File Folder and OPEN file 0821037A
4. **EXECUTE** the Lesson 0821037A
5. **FREEZE** simulator until student is ready.

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

Unit 2 is experiencing a total loss of feedwater event. All attempts to restore main and auxiliary feedwater have been unsuccessful, and both steam generator levels indicate less than 15% wide range. The Unit Supervisor has directed that once-through cooling be established.

INITIATING CUES:

You are the Desk RCO. The Unit Supervisor has directed you to establish one-through cooling in accordance with 2-EOP-15, RCS and Core Heat Removal, Success Path 3, Steps 1 and 2

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

PERFORM RPS LOGIC MATRIX TEST - UNIT 2

NRC S-3

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Perform RPS Logic Matrix Test on Unit 2 (Two-Out-of-Four Logic AB Matrix Test only.)

Faulted JPM? NO

Facility JPM #: 0821103

K/A Rating(s): 012 A4.04 (3.3/3.3)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

This JPM is complete when the operator has completed the Two-Out-of-Four Logic AB Matrix Test and informed the Unit Supervisor.

Evaluation Location:

Simulator	In Plant	Lab	Other
X			

Performance Level:

Perform	Simulate	Discuss
X		

References:
- 2-OSP-62.02, RPS Logic Matrix Test, Revision 13

Validation Time: 24 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- 2-OSP-62.02, RPS Logic Matrix Test, with all sections up to 7.5 initialed as complete.
- 2 "Hemostat" devices to keep the HOLD button DEPRESSED during testing.

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Perform RPS Logic Matrix Test on Unit 2 (Two-Out-of-Four Logic AB Matrix Test only).
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

SPECIFIC DIRECTS FOR SIMULATOR JPMs:

- All simulator JPM steps, including communications, shall be performed for this JPM.
- You are to operate any plant equipment that is necessary for the completion of this JPM.
- The simulator will provide the cues as you perform this JPM.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

Unit 2 is operating at full power (steady state condition). RPS logic matrix surveillance testing is in progress in accordance with 2-OSP-62.02, RPS Logic Matrix Test, and has been completed up to the "Two-out-of-four Logic Matrix Test" section.

INITIATING CUES:

You are the desk RCO. The Unit Supervisor has directed you to perform Section 7.5, Two-Out-Of-Four Logic AB Matrix Test, of the Operations Surveillance Procedure.

For JPM purposes, the Two-Man method specified in the Precautions/Limitations Section of 2-OSP-62.02 will NOT be used; you will be the reader AND doer. Also, only a limited portion of the logic matrix test will be performed.

Pre-job brief has been completed and Section 7.1, System Alignment for Testing is complete. In addition, Section 4.0 would normally have been reviewed previously; however, you may review them for understanding prior to beginning the testing.

START TIME: _____

2-OSP-62.02, SECTION 7.5, RPS LOGIC MATRIX TEST – UNIT 2	
STEP 1: ENSURE Section 4.0, Precautions/Limitations, has been REVIEWED. STANDARD: **REVIEW** Section 4.0 if desired. (Procedure is in progress, this section should already be initialed as required, however, the candidate may review prior to beginning.) COMMENTS:	_____ SAT _____ UNSAT
STEP 2: ENSURE Section 7.1, System Alignment for Testing, is COMPLETE. STANDARD: **REVIEW** Section 7.1 if desired. (Procedure is in progress, this section should already be initialed as required.) **EXAMINER'S CUE:** **STATE: "Section 7.1 has been completed."** COMMENTS:	_____ SAT _____ UNSAT

STEP 3: DEPRESS and HOLD the AB Matrix Relay HOLD pushbutton. VERIFY all four red AB Matrix Relay HOLD lights are lit. STANDARD: **DEPRESS and HOLD AB Matrix Relay HOLD** pushbutton and **VERIFY** all four red AB Matrix Relay HOLD lights are LIT. **EXAMINER'S NOTE: Hemostats should be used for holding the HOLD Pushbutton in.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 4: PLACE the AB Channel Trip Select switch to Position 1 and VERIFY all four white AB Matrix Relay lights are NOT lit. STANDARD: **POSITION AB Channel Trip Select switch to POSITION 1**, and **VERIFY** all four white AB Matrix Relay lights EXTINGUISH. COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 5: PLACE the AB **Matrix** Relay Trip Select switch to Position 1. STANDARD: **POSITION AB Matrix Relay Trip Select switch to Position 1.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 6: VERIFY the following lights change status: (per tables in procedure)

STANDARD: **VERIFY** the following:

- _____ AB1 red HOLD light NOT LIT
- _____ AB1 green DROPOUT light LIT
- _____ K-1 Relay light NOT LIT
- _____ TCB-1 and TCB-5 position lights – Green ON, White OFF
- _____ Left side phase current lights LIT
- _____ TCB-1 and TCB-5 are OPEN locally with armatures UP
- _____ Annunciators K-9 and K-10 are LIT

EXAMINER'S CUE: **When requested, STATE: "SNPO reports TCB-1 and TCB-5 are OPEN with armatures in UP position."**

COMMENTS:

_____ SAT

_____ UNSAT

STEP 7: IF Trip Path Relay K-1 contacts testing is to be conducted by ICM, THEN perform Appendix B, K-Relay Trip Path Test.

STANDARD: **DETERMINE** step to be N/A.

EXAMINER'S CUE: **STATE: "ICM testing will NOT be conducted."**

COMMENTS:

_____ SAT

_____ UNSAT

STEP 8:	PLACE the AB **Matrix** Relay Trip Select switch to the Mid-Position between Position 1 and Position 2.	**CRITICAL STEP**
STANDARD:	**POSITION AB Matrix Relay Trip Select switch to MID-POSITION between Positions 1 and 2.**	_____ SAT
COMMENTS:		_____ UNSAT
STEP 9:	VERIFY the following: (per tables in procedure).	
STANDARD:	**VERIFY** the following: • _____ AB1 thru AB4 red HOLD lights LIT • _____ AB1 thru AB4 green DROPOUT lights NOT LIT • _____ K-1 Relay light LIT • _____ TCB-9 position lights – Open OFF, Closed ON • _____ TCB-1 and TCB-5 armatures are DOWN	_____ SAT _____ UNSAT
EXAMINER'S CUE:	**When requested STATE: "SNPO reports TCB-1 and TCB-5 armatures in DOWN position."**	
COMMENTS:		

STEP 10:	CLOSE both TCB-1 and TCB-5 by turning the Trip Circuit Breaker Reset switch to RESET.	**CRITICAL STEP**
STANDARD:	**POSITION TCB-1 and TCB-5 switches to RESET.**	_____ SAT
COMMENTS:		_____ UNSAT
STEP 11:	VERIFY the following: (per tables in procedure)	
STANDARD:	**VERIFY** the following: • _____ TCB-1 and TCB-5 position lights - Green OFF, White ON • _____ Left side phase current lights NOT LIT • _____ TCB-1 and TCB-5 are CLOSED locally • _____ Annunciators K-9 and K-10 are NOT LIT	_____ SAT _____ UNSAT
EXAMINER'S CUE:	**When requested, STATE: "SNPO reports TCB-1 and TCB-5 are in the CLOSED position."**	
COMMENTS:		

STEP 12: PLACE the AB Matrix Relay Trip Select switch to Position 2. STANDARD: **POSITION AB Matrix Relay Trip Select switch to Position 2.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 13: VERIFY the following lights change status: (per tables in procedure) STANDARD: **VERIFY** the following: • _____ AB2 red HOLD light NOT LIT • _____ AB2 green DROPOUT light LIT • _____ K-2 Relay light NOT LIT • _____ TCB-2 and TCB-6 position lights – Green ON, White OFF • _____ Left side phase current lights go LIT • _____ TCB-2 and TCB-6 are OPEN locally with armatures UP • _____ Annunciators K-1 and K-2 are LIT **EXAMINER'S CUE:** **When requested, STATE: "SNPO reports TCB-2 and TCB-6 are OPEN with armatures in UP position."** COMMENTS:	_____ SAT _____ UNSAT

STEP 14: IF Trip Path Relay K-2 contacts testing is to be conducted by ICM, THEN perform Appendix B, K-Relay Trip Path Test. STANDARD: **DETERMINE** step to be N/A. **EXAMINER'S CUE:** **If asked, STATE: "ICM testing will NOT be conducted."** COMMENTS:	_____ SAT _____ UNSAT
STEP 15: PLACE the AB Matrix Relay Trip Select switch to the Mid-Position between Position 2 and Position 3. STANDARD: **POSITION AB Matrix Relay Trip Select switch to MID-POSITION between Positions 2 and 3.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 16: VERIFY the following: (per tables in procedure). STANDARD: **VERIFY** the following: • _____ AB1 thru AB4 red HOLD lights LIT • _____ AB1 thru AB4 green DROPOUT lights NOT LIT • _____ K-2 Relay light LIT • _____ TCB-9 position lights – Open OFF, Closed ON • _____ TCB-2 and TCB-6 armatures are DOWN **EXAMINER'S CUE:** **When requested, STATE: "SNPO reports TCB-2 and TCB-6 armatures in DOWN position."** COMMENTS:	_____ SAT _____ UNSAT
STEP 17: CLOSE both TCB-2 and TCB-6 by turning the Trip Circuit Breaker Reset switch to RESET. STANDARD: **POSITION TCB-2 and TCB-6 switches to RESET.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 18: VERIFY the following: (per tables in procedure) STANDARD: **VERIFY** the following: • _____ TCB-2 and TCB-6 position lights – Green OFF, White ON • _____ Left side phase current lights NOT LIT • _____ TCB-2 and TCB-6 are CLOSED locally • _____ Annunciators K-1 and K-2 are NOT LIT **EXAMINER'S CUE:** **When requested, STATE: "SNPO reports TCB-2 and TCB-6 are in CLOSED position."** COMMENTS:	_____ SAT _____ UNSAT
STEP 19: PLACE the AB Matrix Relay Trip Select switch to Position 3. STANDARD: **POSITION AB Matrix Relay Trip Select switch to Position 3.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 20: VERIFY the following lights change status: (per tables in procedure)

STANDARD: **VERIFY** the following:

- _____ AB3 red HOLD light NOT LIT
- _____ AB3 green DROPOUT light LIT
- _____ K-3 Relay light NOT LIT
- _____ TCB-3 and TCB-7 position lights – Green ON, White OFF
- _____ Right side phase current lights LIT
- _____ TCB-3 and TCB-7 are OPEN locally with armatures UP
- _____ Annunciators K-4 and K-5 are LIT

EXAMINER'S CUE: **When requested, STATE: "SNPO reports TCB-3 and TCB-7 are OPEN with armatures in UP position."**

COMMENTS:

_____ SAT

_____ UNSAT

STEP 21: IF Trip Path Relay K-3 contacts testing is to be conducted by ICM, THEN perform Appendix B, K-Relay Trip Path Test.

STANDARD: **DETERMINE** step to be N/A.

EXAMINER'S CUE: **If asked, STATE: "ICM testing will NOT be conducted."**

COMMENTS:

_____ SAT

_____ UNSAT

STEP 22:	PLACE the AB Matrix Relay Trip Select switch to the Mid-Position between Position 3 and Position 4.	**CRITICAL STEP**
STANDARD:	**POSITION AB Matrix Relay Trip Select switch to MID-POSITION between Positions 3 and 4.**	_____ SAT
COMMENTS:		_____ UNSAT
STEP 23:	VERIFY the following: (per tables in procedure)	
STANDARD:	**VERIFY** the following: • _____ AB1 thru AB4 red HOLD lights LIT • _____ AB1 thru AB4 green DROPOUT lights NOT LIT • _____ K-3 Relay light LIT • _____ TCB-9 position lights – Open OFF, Closed ON • _____ TCB-3 and TCB-7 armatures are DOWN	_____ SAT _____ UNSAT
EXAMINER'S CUE:	**When requested, STATE: "SNPO reports TCB-3 and TCB-7 armatures in DOWN position."**	
COMMENTS:		

STEP 24: CLOSE both TCB-3 and TCB-7 by turning the Trip Circuit Breaker Reset switch to RESET. STANDARD: **POSITION TCB-3 and TCB-7 switches to RESET.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 25: VERIFY the following: (per tables in procedure) STANDARD: **VERIFY** the following: • _____ TCB-3 and TCB-7 position lights – Green OFF, White ON • _____ Right side phase current lights NOT LIT • _____ TCB-3 and TCB-7 are CLOSED locally • _____ Annunciators K-4 and K-5 are NOT LIT **EXAMINER'S CUE:** **When requested, STATE: "SNPO reports TCB-3 and TCB-7 are in CLOSED position."** COMMENTS:	_____ SAT _____ UNSAT
STEP 26: PLACE the AB Matrix Relay Trip Select switch to Position 4. STANDARD: **POSITION AB Matrix Relay Trip Select switch to Position 4.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 27: VERIFY the following lights change status: (per tables in procedure) STANDARD: **VERIFY** the following: • _____ AB4 red HOLD light NOT LIT • _____ AB4 green DROPOUT light LIT • _____ K-4 Relay light NOT LIT • _____ TCB-4 and TCB-8 position lights – Green ON, White OFF • _____ Right side phase current lights LIT • _____ TCB-4 and TCB-8 are OPEN locally with armatures UP • _____ Annunciators K-12 and K-13 are LIT **EXAMINER'S CUE:** **When requested, STATE: "SNPO reports TCB-4 and TCB-8 are OPEN with armatures in UP position."** COMMENTS:	_____ SAT _____ UNSAT
STEP 28: IF Trip Path Relay K-4 contacts testing is to be conducted by ICM, THEN perform Appendix B, K-Relay Trip Path Test. STANDARD: **DETERMINE** step to be N/A. **EXAMINER'S CUE:** **If asked, STATE: "ICM testing will NOT be conducted."** COMMENTS:	_____ SAT _____ UNSAT

STEP 29: PLACE the AB Matrix Relay Trip Select switch to the OFF position. STANDARD: **POSITION AB Matrix Relay Trip Select switch to OFF.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 30: VERIFY the following: (per tables in procedure) STANDARD: VERIFY the following: • _____ AB1 thru AB4 red HOLD lights LIT • _____ AB1 thru AB4 green DROPOUT lights NOT LIT • _____ K-4 Relay light LIT • _____ TCB-9 position lights – Open OFF, Closed ON • _____ TCB-4 and TCB-8 armatures are DOWN **EXAMINER'S CUE:** **When requested, STATE: "SNPO reports TCB-4 and TCB-8 armatures in DOWN position."** COMMENTS:	_____ SAT _____ UNSAT

STEP 31: CLOSE both TCB-4 and TCB-8 by turning the Trip Circuit Breaker Reset switch to RESET. STANDARD: **POSITION TCB-4 and TCB-8 switches to RESET.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 32: VERIFY the following: (per tables in procedure) STANDARD: **VERIFY** the following: • _____ TCB-4 and TCB-8 position lights – Green OFF, White ON • _____ Right side phase current lights NOT LIT • _____ TCB-4 and TCB-8 are CLOSED locally • _____ Annunciators K-12 and K-13 are NOT LIT **EXAMINER'S CUE:** **When requested, STATE: "SNPO reports TCB-4 and TCB-8 are in CLOSED position."** COMMENTS:	_____ SAT _____ UNSAT
STEP 33: PLACE the AB Channel Trip Select switch to the OFF position. STANDARD: **POSITION AB Channel Trip Select switch to OFF.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 34: VERIFY all four white AB Matrix Relay lights are LIT. STANDARD: **VERIFY** all four white AB Matrix Relay lights are LIT. COMMENTS:	_____ SAT _____ UNSAT
STEP 35: SLOWLY release the AB Matrix Relay HOLD pushbutton. STANDARD: **RELEASE the AB Matrix Relay HOLD pushbutton** by removal of hemostats. COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 36: The AB Matrix Test on RPS Panel MA was SATISFACTORY. STANDARD: **INITIAL** that the AB Matrix Test was SATISFACTORY. COMMENTS:	_____ SAT _____ UNSAT
STEP 37: VERIFY the following acceptance criteria: (per bullet list in procedure) STANDARD: **DETERMINE** that acceptance criteria were MET. COMMENTS:	_____ SAT _____ UNSAT

STEP 38: NOTIFY Unit Supervisor that task is COMPLETE. STANDARD: **NOTIFY** Unit Supervisor that the two-out-of-four logic AB matrix test has been COMPLETED SATISFACTORY per the OSP. **EXAMINER'S CUE: STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	_____ SAT _____ UNSAT

STOP TIME: _____

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

1. **RESTORE** IC-1, 100% power MOL
2. **UNFREEZE** simulator.
3. **TURN ON** the Test Power Supply on RPS Cabinet "A".
4. **FREEZE** simulator until student is ready.
5. **PROVIDE** 2-OSP-62.02, RPS Logic Matrix Test with applicable portions signed off by another operator.
6. **ENSURE** 2 Hemostats are available for Master Relay HOLD pushbutton.
7. No scenario is required for this JPM.

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

Unit 2 is operating at full power (steady state condition). RPS logic matrix surveillance testing is in progress in accordance with 2-OSP-62.02, RPS Logic Matrix Test, and has been completed up to the "Two-out-of-four Logic Matrix Test" section.

INITIATING CUES:

You are the desk RCO. The Unit Supervisor has directed you to perform Section 7.5, Two-Out-Of-Four Logic AB Matrix Test, of the Operations Surveillance Procedure.

For JPM purposes, the Two-Man method specified in the Precautions/Limitations Section of 2-OSP-62.02 will NOT be used; you will be the reader AND doer. Also, only a limited portion of the logic matrix test will be performed.

Pre-job brief has been completed and Section 7.1, System Alignment for Testing is complete. In addition, Section 4.0 would normally have been reviewed previously; however, you may review them for understanding prior to beginning the testing.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

RESPOND TO CLOSURE OF A CCW ISOLATION VALVE FOR AN RCP SEAL COOLER - UNIT 2

NRC S-4

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Respond to an RCP Seal Cooler Valve closure – Unit 2.

Faulted JPM? Yes

Facility JPM #: New

K/A Rating(s): APE 015 AA1.06 (3.1/2.9)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

This JPM is complete when candidate has responded to an RCP Seal Cooler Valve closure, determines the valve cannot be opened and initiates a reactor trip, turbine trip, and secures the affected RCP.

Evaluation Location:				**Performance Level:**		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
X				X		

References:
- 2-ARP-01-J33, RCP Seal Cooler Valve Closure / Power Failure Alarm
- 2-ONP-0120034, Reactor Coolant Pump Off-Normal Procedure, Revision 31

Validation Time: 4 minutes **Time Critical:** YES

Tools/Equipment/Procedures Needed:
- 2-ARP-01-J00, Control Room Panel J Annunciator Response Procedure
- 2-ONP-0120034, Reactor Coolant Pump Off-Normal Procedure

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Respond to an RCP Seal Cooler Valve closure – Unit 2.
- The performance level to be used for this JPM is Perform.
- This IS a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

SPECIFIC DIRECTS FOR SIMULATOR JPMs:

- All simulator JPM steps, including communications, shall be performed for this JPM.
- You are to operate any plant equipment that is necessary for the completion of this JPM.
- The simulator will provide the cues as you perform this JPM.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

Unit 2 is at 100% power. Alarm J-33, RCP Seal Cooler Valve Closure / Power Failure annunciator alarm has actuated.

INITIATING CUES:

You are the Desk RCO. The Unit Supervisor directs you to acknowledge J-33, RCP Seal Cooler Valve Closure / Power Failure annunciator alarm and take appropriate actions per the Annunciator Response Procedure and/or applicable Off-Normal Operating Procedures.

JOB PERFORMANCE MEASURE
PERFORMANCE CHECKLIST

CRITICALSTART TIME: _____

EXAMINER'S NOTE: **At this initiation, the candidate must have the RCP tripped within 10 minutes.**

2-ARP-01-J00, CONTROL ROOM PANEL J ANNUNCIATOR RESPONSE PROCEDURE; J-33, RCP SEAL COOLER VALVE CLOSURE / POWER FAILURE ANNUNCIATOR	
STEP 1: CHECK CCW Rad Monitors R-26-1 and R-26-2. STANDARD: **OBSERVE** CCW Radiation Monitoring Channel R-26-1 and R-26-2, readout for trends. **EXAMINER'S CUE:** **STATE: "Both Channels R-26-1 and R-26-2 are neither in ALARM nor TRENDING UP."** COMMENTS:	_____ SAT _____ UNSAT

STEP 2:	If CCW radiation levels are normal, Then ENSURE all of the Seal Cooler Heat Exchanger Isolation Valves are OPEN.	
STANDARD:	**DETERMINE** RCP 2A1 Seal Cooler Heat Exchanger Isolation Valve HCV-14-11A1 is CLOSED and **OBSERVE** the green CLOSE light illuminated: **ENSURE** all the remaining Seal Cooler Heat Exchanger Isolation Valves are OPEN and **OBSERVE** the red OPEN lights illuminated: • HCV-14-11A2, RCP 2A2 • HCV-14-11B1, RCP 2B1 • HCV-14-11B2, RCP 2B2	_____ SAT _____ UNSAT
EXAMINER'S CUE:	**STATE: "RCP 2A1 cavity temperature is rising. The Unit Supervisor directs you to perform the applicable steps of ONP 2-0120034, Reactor Coolant Pump."**	
EXAMINER'S NOTE:	**Provide the candidate a copy of ONP 2-0120034, Reactor Coolant Pump.**	
COMMENTS:		

2-ONP-0120034, REACTOR COOLANT PUMP OFF-NORMAL PROCEDURE, STEP 8

STEP 3: ENSURE the following RCP seal cooler CCW valves on RTGB 203 are OPEN: • HCV-14-11A1 (failed CLOSED) STANDARD: **POSITION** HCV-14-11A1, RCP 2A1 Seal Cooler CCW Valve to RESET then OPEN on RTGB 203 and **DETERMINE** the valve will not OPEN from the control switch. **EXAMINER'S CUE:** **STATE: "The seal cooler isolation valve cannot be reopened without disassembly and repair."** COMMENTS:	**FAULTED STEP** _____ SAT _____ UNSAT
STEP 4: IF the reactor is critical, THEN trip the reactor and turbine. STANDARD: **DETERMINE** the reactor is critical. **DEPRESS** BOTH Reactor Trip pushbuttons on RTGB-203, (this action will initiate a Turbine Trip). COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 5: STOP the affected RCP(s). STANDARD: **POSITION RCP 2A1 control switch to STOP** and **OBSERVE** zero amps and the green STOP light illuminated. **EXAMINER'S NOTE:** **The candidate may start the associated Lift Pump prior to stopping the RCP.** **EXAMINER'S CUE:** **STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	**CRITICAL STEP** _____ SAT _____ UNSAT

CRITICAL STOP TIME: _____

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

1. **RESTORE** IC-1, 100% power MOL
2. **UNFREEZE** simulator.
3. **SELECT** JPM Lesson File Folder and OPEN file NRC S-4
4. **EXECUTE** the Lesson NRC S-4
5. **FREEZE** simulator until student is ready.

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

Unit 2 is at 100% power. Alarm J-33, RCP Seal Cooler Valve Closure / Power Failure annunciator alarm has actuated.

INITIATING CUES:

You are the Desk RCO. The Unit Supervisor directs you to acknowledge J-33, RCP Seal Cooler Valve Closure / Power Failure annunciator alarm and take appropriate actions per the Annunciator Response Procedure and/or applicable Off-Normal Operating Procedures.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

TRANSFER FEEDWATER FROM AFW TO MFW - UNIT 2

NRC S-5

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Transfer feed control/flow to SG 2A from AFW to MFW – Unit 2.

Faulted JPM? Yes

Facility JPM #: New

K/A Rating(s): 059 A4.03 (2.9/2.9)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

The candidate will shift from AFW flow control to the 15% Bypass Valve on 2A SG. The 15% Bypass valve will fail to control in Auto and require action by the candidate.

Evaluation Location:				**Performance Level:**		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
X				X		

References:
- 2-GOP-201, Reactor Plant Startup – Mode 2 to Mode 1, Revision 42

Validation Time: 21minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- 2-GOP-201, Reactor Plant Startup – Mode 2 to Mode 1

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Transfer feed control/flow to SG 2A from AFW to MFW.
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

SPECIFIC DIRECTS FOR SIMULATOR JPMs:

- All simulator JPM steps, including communications, shall be performed for this JPM.
- You are to operate any plant equipment that is necessary for the completion of this JPM.
- The simulator will provide the cues as you perform this JPM.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

Unit 2 plant startup is in progress. The Unit is ready to shift from Auxiliary Feedwater flow control to the 15% Bypass Valve on 2A Steam Generator.

INITIATING CUES:

Transfer feed control to Steam Generator 2A from Auxiliary Feedwater to Main Feedwater in accordance with 2-GOP-201, Reactor Plant Startup – Mode 2 to Mode 1, Step 6.11.

Maintain level control of Steam Generator 2B with current lineup.

I will serve as your field operators when you request actions outside the control room.

JOB PERFORMANCE MEASURE
PERFORMANCE CHECKLIST

START TIME: _____

2-GOP-201, REACTOR PLANT STARTUP – MODE 2 TO MODE 1, STEP 6.11	
STEP 1: ENSURE CLOSED MV-09-3, 100% Bypass Valve. STANDARD: **VERIFY** MV-09-3, 2A 100% Bypass Valve is CLOSED. COMMENTS:	_____ SAT _____ UNSAT
STEP 2: ENSURE CLOSED MV-09-5, Steam Generator 2A Regulating Block Valve STANDARD: **VERIFY** MV-09-5, Steam Gen 2A Regulating Block Valve is CLOSED and **OBSERVE** green CLOSE light illuminated. COMMENTS:	_____ SAT _____ UNSAT
STEP 3: Locally verify CLOSED MV-09-03, 100% Bypass Valve STANDARD: Locally **VERIFY** MV-09-3, 2A 100% Bypass Valve is CLOSED. **EXAMINER'S CUE:** **When requested, STATE: "SNPO reports MV-09-3, 2A 100% Bypass Valve is CLOSED."** COMMENTS:	_____ SAT _____ UNSAT

STEP 4: Locally verify CLOSED MV-09-5, Steam Generator 2A Reg. Block STANDARD: Locally **VERIFY** MV-09-5, 2A Reg Block Valve is CLOSED **EXAMINER'S CUE: When requested, STATE: "SNPO reports MV-09-5, 2A Reg Block Valve is CLOSED."** COMMENTS:	_____ SAT _____ UNSAT
STEP 5: ENSURE FIC-9011, 2A Feed Reg Valve, is in TRACK with –1.25% output. STANDARD: **VERIFY** FIC-9011, 2A Feed Regulating Valve, is in TRACK with –1.25% output. COMMENTS:	_____ SAT _____ UNSAT
STEP 6: ENSURE LIC-9005, 2A 15% Bypass, is in MANUAL with zero output. STANDARD: **VERIFY** LIC-9005, 2A 15% Bypass, is in MANUAL with zero output. COMMENTS:	_____ SAT _____ UNSAT

STEP 7: STANDARD: COMMENTS:	DEPRESS the 2A Trip Manual Override pushbutton on RTGB-202 to reset the turbine trip input to the controller. **DEPRESS the 2A Trip Manual Override pushbutton on RTGB-202.**	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 8: STANDARD: COMMENTS:	OPEN HCV-09-1A, Feedwater Header A Isolation Valve. **OPEN HCV-09-1A, Feedwater Header A Isolation Valve** and **OBSERVE** red OPEN light illuminated.	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 9: STANDARD: COMMENTS:	OPEN HCV-09-1B, Feedwater Header A Isolation Valve. **OPEN HCV-09-1B, Feedwater Header A Isolation Valve** and **OBSERVE** red OPEN light illuminated	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 10:	While maintaining the 2A SG level stable, OPEN the A 15% Bypass Valve by raising the output on LIC-9005, 2A 15% Bypass, AND reducing AFW flow to the 2A SG.	**CRITICAL STEP**
STANDARD:	**OBSERVE** LIC-9013A, B, C, and D 2A Steam Generator level indications and **MANUALLY OPEN the A 15% Bypass Valve** by **RAISING** the output on LIC-9005, 2A 15% Bypass.	_____ SAT
	EXAMINER'S NOTE: The candidate may periodically take action to reduce AFW flow at this time.	_____ UNSAT
COMMENTS:		
STEP 11:	WHEN the 2A SG level is stable on the 15% Bypass Valve, THEN PLACE LIC-9005, 2A 15% Bypass, in AUTOMATIC.	**CRITICAL STEP**
STANDARD:	**OBSERVE** LR-9012/9022, 2A and 2B SG wide range level recorder red pen for 2A SG upward trend and LIC-9013A, B, C, and D 2A Steam Generator level indications for upward trend then **POSITION LIC-9005, 2A 15% Bypass, in AUTOMATIC**.	_____ SAT
COMMENTS:		_____ UNSAT
STEP 12:	Verify the 15% Bypass Valve controls the 2A SG level in AUTOMATIC.	**FAULTED STEP**
STANDARD:	**DETERMINE** the 15% Bypass Valve is **NOT** controlling the 2A SG level in AUTOMATIC and **POSITION LIC-9005, 2A 15% Bypass to MANUAL.**	_____ SAT
COMMENTS:		_____ UNSAT

STEP 13: Verify the 15% Bypass Valve controls the 2A SG level in MANUAL. STANDARD: **VERIFY** the 15% Bypass Valve controls the 2A SG level in MANUAL. **EXAMINER'S CUE:** **When the student has recognized the failure and returned to MANUAL control of the 15% bypass valve, STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	_____ SAT _____ UNSAT

STOP TIME: _____

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

1. **RESTORE** IC-44 from the JPM IC Set Group.

2. **DO NOT UNFREEZE** simulator.

3. **SELECT** JPM Lesson File Folder and OPEN file NRC S-5

4. **EXECUTE** the Lesson NRC S-5

5. **UNFREEZE** simulator student when the student is ready. The audible alarms will be reinstated when the simulator is unfrozen.

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

Unit 2 plant startup is in progress. The Unit is ready to shift from Auxiliary Feedwater flow control to the 15% Bypass Valve on 2A Steam Generator.

INITIATING CUES:

Transfer feed control to Steam Generator 2A from Auxiliary Feedwater to Main Feedwater in accordance with 2-GOP-201, Reactor Plant Startup – Mode 2 to Mode 1, Step 6.11.

Maintain level control of Steam Generator 2B with current lineup.

I will serve as your field operators when you request actions outside the control room.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

RESPOND TO CCW EXCESSIVE ACTIVITY – UNIT 1 CONTROL ROOM

NRC C-6

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Respond to CCW Excessive Activity.

Faulted JPM? No

Facility JPM #: 0821030

K/A Rating(s): 008 A2.02 (3.2/3.5)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

This JPM is complete when the US has been informed that the Pressurizer Steam Space Sample Heat Exchanger has been isolated.

Evaluation Location:				Performance Level:		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
	X				X	

References:
- 1-ONP-0310030, Component Cooling Water - Off Normal Operations, Revision 35C
- 1-ONP-0310031, Component Cooling Water Excessive Activity, Revision 20B
- 1-ARP-01-S6, Annunciator Response Procedure

Validation Time: 15 minutes **Time Critical:** NO

Tools/Equipment/Procedures Needed:
- 1-ONP-0310030, Component Cooling Water - Off Normal Operations
- 1-ONP-0310031, Component Cooling Water Excessive Activity
- 1-ARP-01-S6, "Annunciator Response Procedure"

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Respond to CCW Excessive Activity – Unit 1.
- The performance level to be used for this JPM is Simulate.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

Unit 1 is operating at 100% power, steady state conditions, MOL. Annunciator S-6 (CCW SURGE TANK LEVEL HIGH/COMPARTMENT A LEVEL LOW) has illuminated. A SNPO was dispatched to locally investigate the CCW Surge Tank. They report level is 4 feet 7 inches and slowly rising and LCV-14-1, Demin Water to Surge Tank, is closed with no make-up flow indicated. All operator actions of 1-ARP-01-S6 have been carried out.

INITIATING CUES:

The Unit Supervisor has directed you to perform the actions required by 1-ONP-0310030, Component Cooling Water – Off Normal Operation, to determine the cause for the high Surge Tank level.

JOB PERFORMANCE MEASURE
PERFORMANCE CHECKLIST

START TIME: _____

ONP-1-0310030, "COMPONENT COOLING WATER – OFF NORMAL OPERATION" STEP 5.3 SUBSEQUENT ACTIONS, STEP 5.	
STEP 1: IF abnormal level conditions exist in the CCW Surge Tank, THEN perform the following: • High level in the CCW Surge Tank. • Check the CCW Radiation Monitors (Channel 56 & 57) for abnormal trends. If high radiation is indicated, refer to ONOP 1-0310031, Component Cooling Water Excessive Activity.	_____ SAT _____ UNSAT
STANDARD: **OBSERVE** Channel 56, CCW 'A' Channel and Channel 57, CCW 'B' Channel readout in µCi/cc for trends.	
EXAMINER'S CUE: **STATE: "Both Channel 56 and 57 are not in ALARM but TRENDING UP."**	
EXAMINER'S NOTE: **At this point, the candidate must refer to 1-ONP-0310031, Component Cooling Water Excessive Activity.**	
COMMENTS:	

STEP 2: NOTIFY Health Physics and Chemistry Department of CCW excessive activity. STANDARD: **CONTACT** the Chemistry and HP Technicians and **INFORM** them that there is excessive activity in the CCW system. **EXAMINER'S CUE:** **STATE: "Chemistry and HP Technicians have been notified."** COMMENTS:	_____ SAT _____ UNSAT
STEP 3: Determine the primary leak rate per OP 1-0010125A, Data Sheet 1, Reactor Coolant System Water Inventory Balance. STANDARD: **PERFORM** Data Sheet 1 per current plant conditions. **EXAMINER'S CUE:** **STATE: "Assume Data Sheet 1 has been completed, and the leak rate is APPROXIMATELY 0.5 GPM."** **EXAMINER'S NOTE:** **For this JPM, Data Sheet 1 need not be completed.** COMMENTS:	_____ SAT _____ UNSAT
STEP 4: IF the plant is in Mode 3 through 6 (SIAS BLOCKED), THEN perform safety function status check of the LOW Mode Off-Normal Procedure for the current plant condition. STANDARD: **DETERMINE** step is NOT APPLICABLE; Unit is in Mode 1. COMMENTS:	_____ SAT _____ UNSAT

STEP 5: VERIFY RCS inleakage from the RCP(s) seal cooler is NOT occurring by the following: • NO unexplained increase in RCP lower seal temperature. • DCS Computer Points are NOT in alarm. STANDARD: **VERIFY** no unexplained INCREASE in any RCP lower cavity seal temperature and no DCS Computer Points are in alarm. **EXAMINER'S CUE:** **STATE: "All RCP seal indications read NORMAL values and DCS Computer Points are NOT in alarm."** **EXAMINER'S NOTE:** **To avoid interfering with on-watch personnel, obtaining actual RCP lower cavity seal temperatures and DCS Computer point information may be simulated or discussed.** COMMENTS:	_____ SAT _____ UNSAT
STEP 6: VERIFY the outlet temperature of the sample heat exchangers does NOT indicate possible leakage. STANDARD: **CONTACT** the SNPO and give directions to CHECK the outlet temperatures on the sample heat exchangers for ABNORMAL values. **EXAMINER'S CUE:** **STATE: "SNPO REPORTS Pressurizer Steam Space Sample heat exchanger return temperature is approximately 130°F, all others are < 90°F."** COMMENTS:	_____ SAT _____ UNSAT

STEP 7: IF a sample heat exchanger indicates possible leakage, THEN go to Appendix A, Isolation of the Sample Heat Exchangers STANDARD: **GO** to Appendix A, Step 3.A and **DETERMINE** 1C Sample Heat Exchanger requires isolation. **EXAMINER'S NOTE: 1C Sample Heat Exchanger has failed.** COMMENTS:	_____ SAT _____ UNSAT
STEP 8: IF the 1C Sample Heat Exchanger is suspected of causing the increase in CCW activity, THEN isolate the heat exchanger by the following: • CLOSE V5202, Pressurizer Steam Space Sample (RTGB 106). STANDARD: **POSITION** V5202, Pressurizer Steam Space Sample handswitch to CLOSE at RTGB 106. **EXAMINER'S CUE: STATE: "GREEN light is ON, RED light is OFF."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 9:	IF the 1C Sample Heat Exchanger is suspected of causing the increase in CCW activity, THEN isolate the heat exchanger by the following: • CLOSE V5205, Pressurizer Steam Space Sample (RTGB 106). STANDARD: **POSITION** V5205, Pressurizer Steam Space Sample handswitch to CLOSE at RTGB 106. **EXAMINER'S CUE:** **STATE: "GREEN light is ON, RED light is OFF."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 10:	IF the 1C Sample Heat Exchanger is suspected of causing the increase in CCW activity, THEN isolate the heat exchanger by the following: • CLOSE V05007, 1C Sample HX Outlet Isol. STANDARD: **CONTACT** the SNPO to CLOSE V05007, 1C Sample HX Outlet Isolation. **EXAMINER'S CUE:** **STATE: "SNPO has CLOSED valve V05007."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 11:	IF the 1C Sample Hat Exchanger is suspected of causing the increase in CCW activity, THEN isolate the heat exchanger by the following: • CLOSE V14506, 1C Sample HX Outlet Isol. STANDARD: **CONTACT** the SNPO to CLOSE V14506, 1C Sample HX Outlet Isolation. **EXAMINER'S CUE:** **STATE: "SNPO has CLOSED valve V14506."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 12:	IF the 1C Sample Heat Exchanger is suspected of causing the increase in CCW activity, THEN isolate the heat exchanger by the following: • CLOSE 14502, 1C Sample HX Outlet Isol. STANDARD: **CONTACT** the SNPO to CLOSE V14502, 1C Sample HX Outlet Isolation. **EXAMINER'S CUE:** **STATE: "SNPO has CLOSED valve V14502."** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 13: IF the 1C Sample Heat Exchanger is suspected of causing the increase in CCW activity, THEN isolate the heat exchanger by the following: • Continue to monitor trends after HX has been isolated to verify leak has stopped. STANDARD: **MONITOR** CCW Radiation Monitor (Channels 56 & 57) to VERIFY leak has been ISOLATED. **EXAMINER'S CUE:** **STATE: "CCW Radiation Monitor Channels 56 & 57 trends are slowly lowering."** COMMENTS:	_____ SAT _____ UNSAT
STEP 14: NOTIFY the US that the 1C Sample Heat Exchanger has been isolated. STANDARD: **NOTIFY** the Unit Supervisor that the 1C Sample Heat Exchanger has been ISOLATED. **EXAMINER'S NOTE:** **STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	_____ SAT _____ UNSAT

STOP TIME: _____

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

Unit 1 is operating at 100% power, steady state conditions, MOL. Annunciator S-6 (CCW SURGE TANK LEVEL HIGH/COMPARTMENT A LEVEL LOW) has illuminated. A SNPO was dispatched to locally investigate the CCW Surge Tank. They report level is 4 feet 7 inches and slowly rising and LCV-14-1, Demin Water to Surge Tank, is closed with no make-up flow indicated. All operator actions of 1-ARP-01-S6 have been carried out.

INITIATING CUES:

The Unit Supervisor has directed you to perform the actions required by 1-ONP-0310030, Component Cooling Water – Off Normal Operation, to determine the cause for the high Surge Tank level.

FPL

Reminder to the TPE Evaluator

Refer to the OJT/TPE Procedure and follow the instructions.

St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

RESTORE POWER TO 2B3 4.16KV BUS FROM OFFSITE – UNIT 2

NRC S-7

Developed/Revised by: L. R. Zilli 12/18/05
Date

Training Management Approval: _____ _____
Date

DRAFT

JOB PERFORMANCE MEASURE

Task: Restore Power to 2B3 4.16KV Bus From Offsite – Unit 2.

Faulted JPM? No

Facility JPM #: 0821118

K/A Rating(s): 062 A4.01 (3.3/3.1)

Duty Area(s): N/A

Task Information: N/A

Task Standard:

This JPM is complete when offsite power has been restored to the 2B3 4.16KV bus.

Evaluation Location:				Performance Level:		
Simulator	In Plant	Lab	Other	Perform	Simulate	Discuss
X				X		

References:
- 2-EOP-99, Appendices/Figures/Tables/Data Sheets, Appendix D, Revision 30

Validation Time: 15 minutes **Time Critical:** No

Tools/Equipment/Procedures Needed:
- 2-EOP-99, Appendix D, Restoration of Offsite Power with EDGs in Operation
- 2-EOP-99, Table 6 completed and initialed

Specific Safety Rules, Personal Protective Equipment and Hazards associated with the task.
- None

Radiological Protection and RWP Requirements:
- None

JOB PERFORMANCE MEASURE
INITIAL CONDITIONS AND SPECIFIC DIRECTIONS

SPECIFIC DIRECTIONS:

- The task you are to perform is: Restore Power to 2B3 4.16KV Bus From Offsite – Unit 2.
- The performance level to be used for this JPM is Perform.
- This is not a time critical JPM.
- During the performance of the task, I will tell you which steps to simulate or discuss.
- I will provide you with the appropriate cues for steps that are simulated or discussed.
- You may use any approved reference materials normally available in the execution of this task, including logs.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

SPECIFIC DIRECTS FOR SIMULATOR JPMs:

- All simulator JPM steps, including communications, shall be performed for this JPM.
- You are to operate any plant equipment that is necessary for the completion of this JPM.
- The simulator will provide the cues as you perform this JPM.
- Indicate to me that you have finished the assigned task by returning the Candidate Cue Sheet that I provided to you.

INITIAL CONDITIONS:

A Loss of Offsite Power has occurred at Unit 2. Both Emergency Diesel Generators were supplying the vital buses when offsite power was restored.

INITIATING CUES:

The Unit Supervisor has directed that the 2B3 Bus be restored from offsite in accordance with 2-EOP-99, Appendix D, Restoration of Offsite Power with EDGs in Operation. Offsite power is available, and 2-EOP-99, Table 6 has been completed.

JOB PERFORMANCE MEASURE
PERFORMANCE CHECKLIST

START TIME: _____

2-EOP-99, APPENDIX D, RESTORE POWER TO 2B3 4.16KV BUS FROM OFFSITE – UNIT 2	
STEP 1: ENSURE Table 6, Vital Power Breaker configuration (LOOP) has been completed for the electrical train(s) supplied by a Unit 2 EDG(s). STANDARD: Candidate may request verification that Table 6 is COMPLETE **EXAMINER'S NOTE: If requested, STATE: "Table 6 is complete."** COMMENTS:	_____ SAT _____ UNSAT
STEP 2: INSERT sync plug and TURN to ST-2B2 position. STANDARD: **POSITION 2B S/U XFMR sync plug to ST-2B2.** COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 3: CLOSE breaker 2-20302, Startup transformer 2B. STANDARD: **POSITION 2-20302, Startup Transformer 2B, to the CLOSED position** and **OBSERVE** red CLOSE light illuminated. COMMENTS:	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 4: STANDARD: COMMENTS:	CLOSE breaker 2-20309, 4.16 KV Bus 2B2 to 2B3 Tie. **POSITION 2-20309, 4.16KV Bus 2B2 to 2BB tie, to the CLOSED position** and **OBSERVE** red CLOSE light illuminated.	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 5: STANDARD: COMMENTS:	ENSURE that the amber light is LIT on the diesel governor control. **VERIFY** Diesel governor control amber light is illuminated.	_____ SAT _____ UNSAT
STEP 6: STANDARD: COMMENTS:	INSERT sync plug and TURN to TIE-2B3 position. **POSITION 2B DG Breaker sync plug to TIE-2B3.**	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 7: STANDARD: COMMENTS:	MATCH voltage using the EDG voltage control. **ENSURE** Voltage control is positioned to MATCH DG (running) to Grid (incoming) voltage by **OBSERVING** VM-1616D, DG Voltage and VM-964, Bus 2B3 voltage.	_____ SAT _____ UNSAT
STEP 8: STANDARD: COMMENTS:	USING EDG governor control, ADJUST syncroscope to SLOW in the COUNTER-CLOCKWISE direction. **ADJUST Governor control until synchroscope is rotating SLOW in the COUNTER-CLOCKWISE direction** by **OBSERVING** SYN 888, Synchroscope.	**CRITICAL STEP** _____ SAT _____ UNSAT
STEP 9: STANDARD: COMMENTS:	When synchroscope is in the 12 O'CLOCK position, CLOSE breaker 2-20411, 4.16 KV Bus Tie 2B3 to 2B2. **POSITION 2-20411, 4.16 KV Bus Tie 2B3 to 2B2 to CLOSE when synchroscope is in the 12 O'CLOCK position** and **OBSERVE** red CLOSE light illuminated.	**CRITICAL STEP** _____ SAT _____ UNSAT

STEP 10:	PLACE EDG governor control to RAISE position UNTIL load is greater than 100 KW (50 amps) to avoid reverse power trip.	**CRITICAL STEP**
STANDARD:	**POSITION Governor control to RAISE until load is >100 KW (50 amps)** and **OBSERVE** REC 1616, 2B D/G watts.	_____ SAT
COMMENTS:		_____ UNSAT
STEP 11:	ENSURE 2B EDG load is 100 KW, (50 amps) and OPEN breaker 2-20401, (2B D/G 4.16 KV Breaker.)	**CRITICAL STEP**
STANDARD:	**POSITION 2-20401, 2B D/G 4.16 KV Breaker control switch to OPEN** and OBSERVE green OPEN position light LIT and red CLOSE light OFF.	_____ SAT
COMMENTS:		_____ UNSAT
STEP 12:	REMOVE the sync plug.	
STANDARD:	**REMOVE** Sync plug from the RTGB.	_____ SAT
COMMENTS:		_____ UNSAT

STEP 13 If NO ESFAS start signal is present, Then STOP the 2B EDG. STANDARD: **VERIFY** no ESFAS signal is present, then **POSITION** 2B EDG to the STOP position and **OBSERVE** amber voltage regulator and governor control lights light illuminated. **EXAMINER'S NOTE:** **When 2B EDG is stopped, STATE: "This JPM is complete."** COMMENTS: **END OF TASK**	_____ SAT _____ UNSAT

STOP TIME: _____

JOB PERFORMANCE MEASURE
SIMULATOR JPM SETUP

1. **RESTORE** IC set for 100% power, MOL. **UNFREEZE** the Simulator.

2. Set **CONFIGURE** to JPM and **START** the lesson for 0821118.

3. **PLACE** RTGB ADVs in auto/auto and **MANUALLY CLOSE** the MSR TCVs. AFAS will automatically throttle.

4. **PERFORM** Table 6 of EOP-99.

5. **TRIGGER** step to restore off-site power. **FREEZE** the Simulator until the student is ready.

6. Make a **SNAPSHOT** if more than one student will be performing the JPM.

7. **UNFREEZE** the Simulator when the student is ready. The audible alarms are reinstated when the simulator is unfrozen.

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF THE TASK)

INITIAL CONDITIONS:

A Loss of Offsite Power has occurred at Unit 2. Both Emergency Diesel Generators were supplying the vital buses when offsite power was restored.

INITIATING CUES:

The Unit Supervisor has directed that the 2B3 Bus be restored from offsite in accordance with 2-EOP-99, Appendix D, Restoration of Offsite Power with EDGs in Operation. Offsite power is available, and 2-EOP-99, Table 6 has been completed.