LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task: 01001101601, Perform ECP IAW GP-003.

Alternate Path:

No

JPM #: ILC-14 NRC JPM RO A1-1

Candidate RO

K/A G 2.1.25 **Rating (RO/SRO):** 3.9/4.2

Task Standard:
Complete GP-003 Attachment 10.1 and be within 250 pcm of Engineering's ECP

Preferred Evaluation Location: Simulator _____ Classroom ___X___

Preferred Evaluation Method: Perform __X__ Simulate _____

References:
GP-003 Attachment 10.1
Station Curve Book

Validation Time: **30** Minutes. **Time Critical:** **No** **Time Critical Time:** **N/A**

Candidate: _____ Name

SSN - -

Performance Rating: circle one SAT UNSAT

Examiner: _____ Print Name _____ Signature _____ Date

	Overall Time	(N/A if not time critical) **Critical Time**
Start:	_____	_____
Finish:	_____	_____
Performance Time (min):	_____	_____

COMMENTS:

Failure criteria is not being within + or – 250 pcm of 1334

1334 + 250 = 1584 PCM

1334 – 250 = 1084 PCM

QUESTION DOCUMENTATION:

Question:

Response:

Tools/Equipment/Procedures Needed: **Provide the candidates with the following:**

GP-003 Attachment 10.1
Station Curve Book

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the Operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the Operator that this is NOT a time critical JPM.

INITIAL CONDITIONS:

- Unit is in Mode 3 preparing for reactor startup.
- Current boron concentration is 1107 ppm
- The unit has been shutdown for 48 hours
- BOL (00150 MWD/MTU)

INITIATING CUES:

The CRS has directed you to complete GP-003 Attachment 10.1, Estimated Critical Condition form in preparation of reactor startup.

START TIME: _____

EXAMINER'S NOTE: PROVIDE THE CANDIDATE(s) WITH HANDOUT FOR GP-003, Attachment 10.1	
STEP 1: Record Integral Boron Worth (Curve 1.13 or POWERTRAX using CALCULATED Critical Boron Concentration) (Use curves or data based upon 547°F, HZP) (step 1.5) **STANDARD:** Candidate uses curve 1.13 to find value of 8750 pcm. **EXAMINER'S CUE:** Inform candidate that POWERTRAX is not available **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 2: Record Xenon Worth (Curve 2.1 or POWERTRAX)1 (step 1.6) **STANDARD:** Candidate uses curve 2.1 to find value of 2570 pcm. **EXAMINER'S CUE:** Inform candidate that Xenon was at equilibrium **EXAMINER'S NOTE:** 1 IF previous critical data is NOT from equilibrium conditions, THEN contact the Reactor Engineer for Xenon Worth. COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 3: Record Power Defect Worth (Curve 1.3 or POWERTRAX) (step 1.7) **STANDARD:** Candidate uses curve 1.3 to find value of 1420 pcm. **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 4: Record Samarium Worth (Curve 2.4A, 2.4B, 2.5 or POWERTRAX)[1] (STEP 1.8) **STANDARD:** Candidate uses curve 2.5 to find value of 380 pcm **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS: 1 At the Beginning of Life (BOL) prior to reaching the equilibrium Samarium Value use Curve 2.5 or POWERTRAX data. After equilibrium Samarium concentration is reached, use Curve 2.4A (BOL) or Curve 2.4B (EOL), interpolating as necessary, or use POWERTRAX data.	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 5: Record Inserted Rod Worth at Power (Curve 1.6, 1.8 or POWERTRAX)[2] (step 1.9) **STANDARD:** Candidate uses curve 1.6 to find value of 1 pcm. **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS: 2 IF previous rod position was greater than 128 steps on Bank "D", THEN use the Full Power Rod Worth Curve 1.6. For rod positions less than 128 steps on Bank "D", Curve 1.8 should be used.	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 6: Record Integral Boron Worth (Curve 1.13 or POWERTRAX using CALCULATED Critical Boron Concentration) (Use curves or data based upon 547°F, HZP) (step 2.4) **STANDARD:** Candidate uses curve 1.13 to find value of 10750 pcm **EXAMINER'S CUE:** **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 7: Record Xenon Worth (Curve 2.3 or POWERTRAX)1 (step 2.5) **STANDARD:** Candidate uses curve 2.3 to find value of 540 pcm. **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 8: IF Samarium Worth is at equilibrium, THEN DETERMINE Samarium worth using one of the following. (step 2.6) **STANDARD:** Candidate determines Samarium was not at equilibrium and N/A's step. **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 9: IF the startup is due to a trip before equilibrium Samarium is reached, THEN ADD the change as determined from Curve 2.4A to the previous Samarium worth of Step 1.8. (step 2.7) **STANDARD:** Candidate adds value of step 1.8 (380 pcm) + Change (116 pcm) = 496 pcm **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 10: REACTIVITY CHANGES FROM PREVIOUS CRITICAL TO PROJECTED CRITICAL.

CRITICAL STEP

___ SAT

___ UNSAT

Complete the following table as follows:

1. **ENTER** the required information.

   (Each value entered into the PREVIOUS and PROJECTED fields should be entered as POSITIVE NUMBERS)

2. **PERFORM** the designated calculations to determine the change in each parameter and the total change in reactivity.

STANDARD: Candidate enters values into table and performs calculations

.

	Previous	Action	Projected	Result
a. Integral Boron Worth	8750	Subtract	10750	= - 2000 pcm
b. Xenon Worth	2570	Subtract	540	= 2030 pcm
c. Samarium Worth	380	Subtract	496	= - 116 pcm
d. Power Defect	1420	Subtract	0	= 1420 pcm
e. Change in Reactivity				1334 pcm

EXAMINER'S CUE: NONE

EXAMINER'S NOTE: NONE

COMMENTS:

STEP 11: REACTIVITY BALANCE Candidate performs step 3.1 **STANDARD:** Candidate inputs values to step 3.1 1. New Controlling Rod Worth = _____1_____ + _____1127_____ Inserted Rod Worth Change in Reactivity (Step 1.9) (Step 3.2.e) = _____1128_____ PCM **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS: **END OF TASK**	**CRITICAL STEP** ___ SAT ___ UNSAT

STOP TIME: _____

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

Tools/Equipment/Procedures Needed: Provide the candidates with the following:

GP-003 Attachment 10.1
Station Curve Book

DIRECTIONS TO CANDIDATE:

When I tell you to begin, you are to perform GP-003 Attachment 10.1, Estimated Critical Condition form. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

CANDIDATE INFORMATION:

Inform the Operator that this is NOT a time critical JPM.

INITIAL CONDITIONS:

- Unit is in Mode 3 preparing for reactor startup.
- Current boron concentration is 1156 ppm
- The unit has been shutdown for 48 hours
- Current Burnup is 150 MWD/MTU

INITIATING CUES:

The CRS has directed you to complete GP-003 Attachment 10.1, Estimated Critical Condition form in preparation of reactor startup.

LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task: 01000100905, Calculate the Boron Addition Required Prior to Initiating a Natural Circulation Cooldown to CSD

Alternate Path:

No

JPM #: ILC-14 NRC JPM RO A1-2

Candidate RO

K/A G 2.1.25 **Rating (RO/SRO):** 3.9/4.2

Task Standard:

Boron addition and BAST level change calculated within stated standards.

Preferred Evaluation Location:

Simulator ___ ___ Classroom ___X___

Preferred Evaluation Method:

Perform __X__ Simulate ___ ___

References:

Station Curve Book
EPP-5, Step 11

Validation Time: **12** Minutes. **Time Critical:** **No** **Time Critical Time:** **N/A**

Candidate: _____ Name

SSN - -

Performance Rating: circle one SAT UNSAT

Examiner: _____

	Overall Time	(N/A if not time critical) **Critical Time**
Start:	_____	Start: _____
Finish:	_____	Finish: _____
Performance Time (min):	_____	_____

Print Name Signature Date

COMMENTS:

Failure criteria is not being within 870-900 PPM final boron concentration and final BAST level 50-55%

QUESTION DOCUMENTATION:

Question:

Response:

Tools/Equipment/Procedures Needed: Provide the candidates with the following:

Station Curve Book
Straight Edge
EPP-5, Step 11

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the Operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the Operator that this is **NOT** a time critical JPM.

INITIAL CONDITIONS:

- The plant tripped from 50% RTP when a loss of off-site power occurred.
- The crew is performing EPP-5, Natural Circulation Cooldown.
- The TSC is NOT staffed.
- Core Burnup is 16000 MWD/MTU
- Boron Concentration is 200 PPM
- Tavg is 547˚F
- Boric Acid Storage Tank “A” is in service, aligned to blend with level at 85%.
- POWERTRAX is NOT available.

INITIATING CUES:

The CRS wants to initiate boration while necessary support personnel are reporting. You have been directed to determine the minimum required boron concentration for CSD (200˚F) and then calculate the boron addition necessary to achieve that boron concentration **(with no allowance for PZR outsurge).** In accordance with OP-301 Section 8.2.2.3, “For large additions, **ESTIMATE** expected BAST level decrease for target boration”.

START TIME: _____

EXAMINER'S NOTE: PROVIDE THE CANDIDATE(s) WITH HANDOUT FOR OP-301 Section 8.2.2.3 Boration.	
STEP 1: Determine minimum CSD Boron Concentration **STANDARD:** Candidate uses curve or table 1.14 to obtain 875 ppm. Reads no less than 870 to 900 ppm. **EXAMINER'S CUE:** None **EXAMINER'S NOTE:** The curve line falls between the 870 PPM and the 900 PPM line, allowing for a minor curve reading error since increments are 50 PPM. COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 2: Determine the boron concentration change required. **STANDARD:** 875 ppm – 200ppm = 675 ppm **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** **900 ppm – 200 ppm = 700 ppm** **870 ppm – 200 ppm = 670 ppm** COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 3: Determine boration required. **STANDARD:** Using Boron / Dilution Table 5.11 of the Station Curve Book, System Temperature of 547°F, calculated boric acid addition is 1654.1 gallons (875 PPM) Minimum - 870 PPM, boration volume is 1641.6 gallons Maximum - 900 PPM, boration volume is 1716 gallons Target – 875 PPM, boration volume is 1654.1 gallons **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 4: "For large additions, **ESTIMATE** expected BAST level decrease for target boration". **STANDARD:** Candidate uses curve 8.18 to find value of 1 pcm. **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE: Calculation on Curve 8.18 as follows:** **GALLONS to % LEVEL = (GALLONS – 1024) / 52.36** **% LEVEL to GALLONS = (% LEVEL)(52.36) + 1024 BAST level of 85% = 5474.6 gallons** **Volume of boric acid to be added to the RCS = >1641.6 gallons and <1716 gallons.** **5474.6 – 1654.1 (875 PPM) = 3820.5 gallons which equates to a BAST Level of 53.41%.** **5474.6 – 1641.6 (870 PPM) =3833 gallons which equates to a BAST level of 53.65%.** **5474.6 – 1716 (900 PPM)= 3758.6 gallons which equates to a BAST level of 52.23%.** **EXAMINER'S NOTE: If candidate reads Curve 8.18 for level change:** **5475 – 1654.1 = 3820.9 gallons which equates to a BAST level of 53%.** **5475 – 1641.6 = 3833.4 gallons which equates to a BAST level of 53%.** **5475 – 1716= 3759 gallons which equates to a BAST level of 52%.** COMMENTS: **END OF JPM**	**CRITICAL STEP** ___ SAT ___ UNSAT

STOP TIME: _____

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

- The plant tripped from 50% RTP when a loss of off-site power occurred.
- The crew is performing EPP-5, Natural Circulation Cooldown.
- The TSC is NOT staffed.
- Core Burnup is 16000 MWD/MTU
- Boron Concentration is 200 PPM
- Tavg is 547˚F
- Boric Acid Storage Tank "A" is in service, aligned to blend with level at 85%.
- POWERTRAX is NOT available.

INITIATING CUES:

The CRS wants to initiate boration while necessary support personnel are reporting. You have been directed to determine the minimum required boron concentration for CSD (200˚F) and then calculate the boron addition necessary to achieve that boron concentration **(with no allowance for PZR outsurge).** In accordance with OP-301 Section 8.2.2.3, "For large additions, **ESTIMATE** expected BAST level decrease for target boration".

LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

ILC-14 NRC JPM RO A2
Rev 0

Determine Proper Equipment Boundaries

Concurred By: _____ **Date:** _____
Operations

Approved By: _____ **Date:** _____
Superintendent/Supervisor - Training

LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task: 01110115901, Determine Proper Equipment Boundaries

Alternate Path:

No

JPM #:	**Candidate**
ILC-14 NRC JPM RO A2	RO

K/A	**Rating (RO/SRO):**
G 2.2.13	4.1/4.3
G 2.2.41	3.5/3.9

Task Standard:

Determine the pump boundaries and power supply necessary to isolate the leakage from relief valve CVC-2080.

Preferred Evaluation Location: Simulator ___ Classroom ___X___

Preferred Evaluation Method: Perform __X__ Simulate ___ ___

References:

P&ID 5379-685 Sheet 2 of 3
EDP-002
OPS-NGGC-1301

Validation Time: **30** Minutes. **Time Critical:** **No** **Time Critical Time:** **N/A**

Candidate: _____
Name

SSN - -

Overall
Start: _____
Finish: _____

Performance Rating: SAT UNSAT (circle one)

Performance Time (min): _____

Examiner: _____ _____
Print Name Signature

COMMENTS:

Failure to meet critical steps

QUESTION DOCUMENTATION:

Question:

Response:

Tools/Equipment/Procedures Needed: Provide the candidates with the following:

P&ID 5379-685 Sheet 2 of 3
EDP-002
OPS-NGGC-1301

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the Operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the Operator that this is **NOT** a time critical JPM.

INITIAL CONDITIONS:

- The plant is in Mode 1 at 100% RTP.
- Charging Pump A suction relief valve CVC-2080 has failed open.
- The operating crew has entered AOP-016, Excessive Primary Plant Leakage, to control the plant.

INITIATING CUES:

Using the provided references only, identify the pump boundary valves and motor breaker to expedite the pump isolation and termination of the leakage.

START TIME: _____

Examiner's NOTE: This JPM consists of identifying the boundaries necessary to isolate the leakage path from Charging Pump A suction relief valve CVC-2080. The sequence of the component isolation is NOT required for the performance of this JPM.	
STEP 1: Review P&IDs to determine pump boundary valves. **STANDARD:** Candidate will use the necessary plant drawing(s) to identify the pump boundary valves. **EXAMINER'S CUE:** None **EXAMINER'S NOTE:** **P&ID 5379-685 Sheet 2 of 3 will be used to identify the pump boundary valves.** COMMENTS:	___ SAT ___ UNSAT

STEP 2: Identify the pump boundary valves. **STANDARD:** The following valves are required to be verified in the selected positions to ensure that the leak flow path is isolated : • CVC-270, Charging Pump A Suction - CLOSED • CVC-290, Charging Pump A to Charging Line - CLOSED • CVC-291, Charging Pump A to Seal Injection - CLOSED **Not required for credit.** Additional isolation valves that can be included are as follows: • CVC-465, Charging Pump A Suction Vent - CLOSED • CVC-275F, Charging Pump A Suction Line Vent – LOCKED CLOSED • CVC-280C, Charging Pump A Drain - CLOSED • CVC-400A, Charging Pump A Leakage Isolation - OPEN • CVC-277C, Charging Pump A Recirc Root – LOCKED CLOSED • CVC-466, Charging Pump A Suction Stabilizer Drain - OPEN **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** **Vent and drains are NOT required to be included.** COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 3: Determine the power supply to Charging Pump A. **STANDARD:** Candidate determines that Charging Pump A power supply is breaker 52/34B – RACKED OUT. **Not required for credit.** Additional breakers / switches that can be included are as follows: • RTGB Control switch for Charging Pump A - CAPPED • Power Panel 37 Circuit 2, Charging Pump A Suction Stabilizer Heater Breaker – OPEN **EXAMINER'S CUE: Provide copy of EDP-002 if requested by the candidate.** **EXAMINER'S NOTE: Charging Pump A power supply is located in EDP-002, Section 7.0, 480V Bus DS, Breaker 52/34B.** **Power supply is also available on the RTGB on the pump control switch.** COMMENTS: **END OF TASK**	**CRITICAL STEP** ___ SAT ___ UNSAT

STOP TIME: _____

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the Operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the Operator that this is **NOT** a time critical JPM.

INITIAL CONDITIONS:

- The plant is in Mode 1 at 100% RTP.
- Charging Pump A suction relief valve CVC-2080 has failed open.
- The operating crew has entered AOP-016, Excessive Primary Plant Leakage, to control the plant.

INITIATING CUES:

Using the provided references only, identify the pump boundary valves and motor breaker to expedite the pump isolation and termination of the leakage.

LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task:

Alternate Path:

Yes

JPM #:

ILC-14 NRC JPM RO/SRO A3

Candidate

RO/SRO

K/A Rating (RO/SRO):

G 2.3.15 2.9/3.1

Task Standard:

Determine requirements for releasing items from the RCA

Preferred Evaluation Location:

Simulator _____ Classroom ___X___

Preferred Evaluation Method:

Perform __X__ Simulate _____

References:

HPP-004, Radiological Control of Tools and Equipment

Validation Time: **5** Minutes. **Time Critical:** **No** **Time Critical Time:** **N/A**

Candidate: _____
Name

SSN - -

Performance Rating: circle one SAT UNSAT

Examiner: _____ _____ _____
Print Name Signature Date

	Overall Time	(N/A if not time critical) **Critical Time**
Start:	_____	_____
Finish:	_____	_____
Performance Time (min):	_____	_____

COMMENTS:

Failure criteria is not identifying the critical tasks.

QUESTION DOCUMENTATION:

Question:

Response:

Tools/Equipment/Procedures Needed:

None

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the Operator that this is **NOT** a time critical JPM.

INITIAL CONDITIONS:

- OST-908-2, Component Cooling Water Pump 'A' Test has been completed.
- You have the following items for use during the OST.
    1. Differential Pressure Instrument
    2. OST-908-2
    3. Clipboard
    4. Pen
    5. PPE
- You are ready to exit the RCA

INITIATING CUES:

You have completed OST-908-2 and are ready to exit the RCA with the items used for the OST. Describe your actions for releasing the above items.

START TIME: _____

STEP 1: Place personal and hand-held items in the SAM/CRONOS and press start (HPP-004 steps 8.1.1-8.1.3) STANDARD Candidate Places PPE, keys, dosimetry, procedure, pen, items from pockets into the SAM/CRONOS and presses start. **EXAMINER'S CUE:** **Inform candidate that the SAM alarms.** **EXAMINER'S NOTE:** **If candidate places the D/P Instrument in the SAM it is failure criteria. HP must be released by RC personnel. See step 3.** COMMENTS:	**Critical Task** ___ SAT ___ UNSAT
STEP 2: If the SAM/CRONOS alarms, then contact RC personnel (step 8.1.4) **STANDARD:** Candidate notifies RC personnel of SAM/CRONOS alarm. **EXAMINER'S CUE:** **Notify candidate that the** SAM/CRONOS **is in alarm.** **EXAMINER'S NOTE:** **Only RC personnel are allowed to remove items from The monitor following an alarm.** COMMENTS:	**Critical Task** ___ SAT ___ UNSAT

STEP 3: All other items shall be released by RC personnel. (step 8.1.5) **STANDARD:** Candidate determines the Differential Pressure Instrument must be released by RC personnel and contacts the RC shift technician. **EXAMINER'S CUE:** **Notify candidate that RC personnel have been notified.** **EXAMINER'S NOTE:** **NONE** COMMENTS: **END OF TASK**	**Critical Task** ___ SAT ___ UNSAT

STOP TIME: _____

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the Operator that this is **NOT** a time critical JPM.

INITIAL CONDITIONS:

- OST-908-2, Component Cooling Water Pump 'A' Test has been completed.
- You have the following items for use during the OST.
    6. Differential Pressure Instrument
    7. OST-908-2
    8. Clipboard
    9. Pen
    10. PPE
- You are ready to exit the RCA

INITIATING CUES:

You have completed OST-908-2 and are ready to exit the RCA with the items used for the OST. Describe your actions for releasing the above items.

LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task: 02341100303 Maintain Required Logs, Records, and Status Boards

Alternate Path:

NO

JPM #:

ILC-14 NRC JPM SRO A1-1

Candidate

SRO

K/A **Rating (RO/SRO):**

G 2.1.20 4.6

Task Standard:

Implement the compensatory actions required for ERFIS inoperability.

Preferred Evaluation Location:

Simulator ___ Classroom ___X___

Preferred Evaluation Method:

Perform ___X___ Simulate _____

References:

APP-036-J4 OMM-001-11, Logkeeping OMM-024, Rod Position Channel Check
FMP-001, Core Operating Limits Report (COLR) FMP-009, Power Distribution Control
ITS

Validation Time: 45 Minutes Time Critical: Yes Time Critical Time: (15 minutes to document AFD compliance)

Candidate: _____ Name

SSN - - _____

	Overall Time	(N/A if not time critical) Critical Time
Start:	_____	_____
Finish:	_____	_____
Performance Time (min):	_____	_____

Performance Rating: circle one SAT UNSAT

Examiner: _____ Print Name _____ Signature _____ Date

COMMENTS:

QUESTION DOCUMENTATION:

Question:

Response:

Tools/Equipment/Procedures Needed:

APP-036-J4
OMM-001-11, Logkeeping
OMM-024, Rod Position Channel Check
FMP-001, Core Operating Limits Report (COLR)
FMP-009, Power Distribution Control
ITS

READ TO OPERATOR

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the Operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the candidate there **ARE** time critical steps in this JPM.

INITIAL CONDITIONS:

- The plant is at 100% RTP, steady state with RCS boron concentration at 95 ppm.
- APP-036-J4, ERFIS TROUBLE has been received.
- The BOP Operator notes that all of the ERFIS screens are blank.

INITIATING CUES:

You are the CRS. ERFIS has failed and annunciator APP-036-J4, Actions #1 and 2 have been completed. Determine what compensatory actions are required to ensure ITS compliance for the ERFIS failure and the means of documenting the required actions.

This task is TIME CRITICAL.

START TIME: _____ **TIME CRITICAL START TIME: _____**

STEP 1: Candidate reviews APP-036-J4 actions and implements Action #3, If ERFIS is inoperable, Then implement OMM-001-11. **STANDARD:** Candidate reviews APP-036-J4 and implements Action #3. **EXAMINER'S NOTE: The NOTE on APP-036-J4 states If ERFIS is OOS, Then the ITS SRs require actions within time frames ranging from immediate to 4 hours. OMM-001-11 contains the required actions for ERFIS OOS.** COMMENTS:	___ SAT ___ UNSAT

Procedure NOTE: **ERFIS is Out Of Service When:**

Logging is required for two or more of the following functions:
ERDS, AFD, Flux Map, SPDS, Calorimetric,
Rod Deviation Monitor, Effluent Logs (NPRDES)

Or When

Any two MUXs are OOS.

STEP 2: If ERFIS is inoperable, then immediately refer to the following Technical Specifications / TRM and perform the applicable SR requirements at the designated times. (OMM-001-11, Step 9.5.1)	**Critical Step**
1. SR 3.2.3.2, Verify AFD is within limits and log AFD for each Operable excore channel. (15 minutes)	___ SAT
STANDARD: Candidate reviews the ITS SR 3.2.3.2 and annotates that AFD values will be documented on FMP-009, Attachment 10.5. AFD target values will be obtained from the Control Room Status Board and values will have to be within + 5% of the target values.	___ UNSAT
EXAMINER'S NOTE: NONE	
EXAMINER'S CUE: **Present candidate with a copy of the Control Room Status Board when requested.** **Delta Flux readings from the RTGB meters are as follows:** **N-41 = -1.2%** **N-42 = -0.8%** **N-43 = -2.7%** **N-44 = -1.5%**	
COMMENTS:	

Time Critical Stop Time for Logging AFD: _____ (15 minute limit)

STEP 3: If ERFIS is inoperable, then immediately refer to the following Technical Specifications / TRM and perform the applicable SR requirements at the designated times. (OMM-001-11, Step 9.5.1) **2.** SR 3.1.4.1, Verify individual rod positions within alignment limit. (4 hours) **STANDARD:** Operator determines that the individual rod positions are to be documented in OMM-024, Attachment 10.1. **EXAMINER'S NOTE:** NONE **EXAMINER'S CUE: Present candidate with copy of the Rod Log when requested.** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
STEP 4: If ERFIS is inoperable, then immediately refer to the following Technical Specifications / TRM and perform the applicable SR requirements at the designated times. (OMM-001-11, Step 9.5.1) 3. SR 3.1.6.2, Verify each control bank insertion is within the limits specified in the COLR every 4 hours, and document in AutoLog. **STANDARD:** Candidate determines that the control rods are within the insertion limits by comparing the present rod positions with Figure 1.0, Control Group Insertion Limits for Three Loop Operation of the COLR, FMP-001. **EXAMINER'S NOTE: Station Curve 1.9B may be used to make this determination if desired.** **EXAMINER'S CUE: Present the candidate with a copy of FMP-001 when requested.** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT

STEP 5: If ERFIS is inoperable, then immediately refer to the following Technical Specifications / TRM and perform the applicable SR requirements at the designated times. (OMM-001-11, Step 9.5.1) 4. SR 3.1.7.1, Perform Channel Check by comparing analog rod position indication and bank demand position indication (4 hours when greater than 6 inches rod motion). **STANDARD:** Candidate determines that control rods have NOT moved in the past 4 hours. **EXAMINER'S NOTE: Satisfactory completion of OMM-024 checks meets this channel check.** **EXAMINER'S CUE: State that the control rods have NOT been moved over the past 8 hours.** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
STEP 6: If ERFIS is inoperable, then immediately refer to the following Technical Specifications / TRM and perform the applicable SR requirements at the designated times. (OMM-001-11, Step 9.5.1) 5. TRM 3.25, Plant Calorimetric Measurement. **STANDARD:** Candidate enters TRM 3.25 and determines that NO actions are required at the present time for the CALO program inoperability. **EXAMINER'S NOTE:** **EXAMINER'S CUE: Inform the candidate that the previous calorimetric (OST-010) was completed 8 hours ago satisfactory.** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
END OF TASK	
Terminating Cue: When the candidate has performed all of the compensatory actions required for the ERFIS inoperability, the JPM is complete.	

TIME STOP: _____

Cue Sheet

Delta Flux readings from the RTGB meters are as follows:

N-41 = -1.2%

N-42 = -0.8%

N-43 = -2.7%

N-44 = -1.5%

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

CANDIDATE INFORMATION:

Inform the candidate there **ARE** time critical steps in this JPM.

INITIAL CONDITIONS:

- The plant is at 100% RTP, steady state with RCS boron concentration at 95 ppm.
- APP-036-J4, ERFIS TROUBLE has been received.
- The BOP Operator notes that all of the ERFIS screens are blank.

INITIATING CUES:

You are the CRS. ERFIS has failed and annunciator APP-036-J4, Actions #1 and 2 have been completed. Determine what compensatory actions are required to ensure ITS compliance for the ERFIS failure and the means of documenting the required actions.

This task is TIME CRITICAL.

LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task: 02344101203, Complete Equipment Inoperable Record.

Alternate Path:

No

JPM #:

ILC-14 NRC JPM SRO A1-2

Candidate

SRO

K/A Rating (RO/SRO):

G 2.1.18 3.6/3.8

Task Standard:

Complete OMM-007, Attachment 10.1 and 10.11.

Preferred Evaluation Location:

Simulator _____ Classroom ___X___

Preferred Evaluation Method:

Perform __X__ Simulate _____

References:

OMM-007, Equipment Inoperable Record
ITS 3.7.7
PLP-100, Technical Requirements Manual

Validation Time: **30** Minutes. **Time Critical:** **No** **Time Critical Time:** **N/A**

Candidate: _____ Name

SSN - - _____

Performance Rating: circle one SAT UNSAT

Examiner: _____ Print Name _____ Signature _____ Date

	Overall Time	(N/A if not time critical) **Critical Time**
Start:	_____	_____
Finish:	_____	_____
Performance Time (min):	_____	_____

COMMENTS:

Failure criteria is not identifying the critical tasks.

QUESTION DOCUMENTATION:

Question:

Response:

Tools/Equipment/Procedures Needed: Provide the candidates with the following:

OMM-007, Equipment Inoperable Record
ITS 3.7.7

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the Operator that this is NOT a time critical JPM.

INITIAL CONDITIONS:

- Unit operating at 100% RTP steady state
- SW Pump B removed from service at 1245 hours on today's date due to failed motor bearing
- No additional equipment is inoperable
- Current plans will return to service in 44 hours
- Work order # 47548629 has been initiated
- NCR # 407627 has been initiated

INITIATING CUES:

The CRS has directed you to complete the necessary OMM-007 attachment(s) for the inoperability of SW Pump B

Another SRO will perform the checklist of OMM-001-8, Equipment Out of Service Checklist and AD-OP-ALL-NGGC-1000, Conduct of Operations.

All necessary outside notifications will be made by the Shift Manager.

START TIME: _____

EXAMINER'S NOTE: PROVIDE THE CANDIDATE(s) WITH HANDOUT FOR OMM-007, Attachment 10.1 and 10.11	
STEP 1: Perform the Revision Verification (Step 8.2.1) **STANDARD:** Candidate performs the revision verification or states that he uses the Control Room copy, enters today's date and initials on Attachment 10.1, EIR – ITS/TRM/ODCM/RG 1.97. **EXAMINER'S CUE:** **Revision verification is the correct revision.** **EXAMINER'S NOTE:** NONE COMMENTS:	___ SAT ___ UNSAT
STEP 2: Enter the name of the equipment which is inoperable in Section "A" (Step 8.2.2) **STANDARD:** Candidate enters SW Pump B in Section A. **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS:	___ SAT ___ UNSAT
STEP 3: Record the reason for the equipment inoperability. This may include MOD number, problems with the equipment, and/or work to be performed (Step 8.2.3) **STANDARD:** Candidate documents that motor bearing failure is the reason for the inoperability. **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS:	___ SAT ___ UNSAT

STEP 4: Verify a Work Request has been initiated (if applicable) AND record the WR number (ACR 94-00281) (Step 8.2.4) **STANDARD:** Candidate documents a work request number and fills in the WR # blank. **EXAMINER'S NOTE:** NONE COMMENTS:	___ SAT ___ UNSAT
STEP 5: IF the unavailability is unplanned, AND the component is part of a system listed on Attachment 10.11, THEN review OMM-048 AND the Maintenance Rule Scoping and Performance Criteria basis section of the Maintenance Rule Database to determine if the listed function(s) of the system is/are affected. IF a system function is affected, THEN initiate a CR stating a potential Safety Significant Functional Failure has occurred IAW OMM-048, and record the CR# in Section "D" (Step 8.2.5) **STANDARD:** Candidate determines that the unavailability is unplanned and the component is listed in Attachment 10.11. A CR number is recorded in the blank under Section D. **EXAMINER'S NOTE: Attachment 10.11, Maintenance Rule Systems, lists System # 4060, Service Water System to be considered a High Safety Significant System under the Maintenance Rule.** COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 6: Complete Section "E" as follows: Item 1 – Enter the TIME AND DATE that the equipment was declared inoperable (Step 8.2.6) **STANDARD:** Candidate enters the TIME as 1245 and DATE as today's date **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 7: Complete Section "E" as follows: Item 2 – Circle the applicable document abbreviation and enter applicable LCO, TRMS or Specification number. Be specific. For example, provide table number and item number where applicable.(Step 8.2.6) **STANDARD:** Candidate circles ITS and enters LCO 3.7.7, Condition A. References ITS 3.8.1. **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 8: Complete Section "E" as follows: Item 3 – Enter any applicable actions required to satisfy the document identified in Item 2 and any required completion time. (Step 8.2.6) **STANDARD:** Candidate enters as follows: Restore required SW Train to operable status within 72 hours. OR apply Condition D – Be in Mode 3 in 6 hours and Mode 5 in 36 hours. **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 9: Complete Section "E" as follows: Item 4 – Enter the maximum time the equipment is allowed to be inoperable in the applicable blank. Circle hrs/days as they apply to the Special Report. (Step 8.2.6) **STANDARD:** Candidate enters 78 hours in the MODE 3 blank and 108 hours in the MODE 5 blank. **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 10: Complete Section "E" as follows: Item 5 – Enter the Time and Date that Item4 is required in the applicable blank. (Step 8.2.6) **STANDARD:** Candidate enters 1845 in the Time blank and 3 days from time declared inoperable in the Date blank for MODE 3. Candidate enters 0045 in the Time blank and 5 days from time declared inoperable in the Date blank for MODE 5. **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 11: Complete Section "E" as follows: Item 6 – Enter any applicable surveillances or activities and required frequencies which are required as a result of the component inoperability. (Step 8.2.6) **STANDARD:** Candidate enters NONE. **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 12: IF the component is an ITS Support System component, THEN perform Attachment 10.12, which is provided to ensure Safety Function Determinations are performed consistently. The TRM contains in-depth guidance for performing Safety Function Determinations. [CAPR 193057] (Step 8.2.7) (Attachment 10.1, Section F)

CRITICAL STEP

___ SAT

STANDARD: Candidate determines the following from Attachment 10.12, Loss of Safety Function Worksheet, Page 1 of 4:

___ UNSAT

1. TS Support Feature is Inoperable –
   Yes, SW Pump B.

2. Determine the impact the inoperability has on applicable supported systems.

3. Does the TS support feature result in a supported feature LCO not met –
   NO

4. Exit the SFDP.

Attachment 10.12, Page 2 of 4 completed as follows:
Revision status checked with Date and INIT filled in.
Date of 5/28/14 and Time of 1245 completed
MODE 1, Power – 100%, RCS Temperature - 575.9°F, RCS Pressure – 2235 psig.

1) List inoperable ITS Support Feature: SW Pump B listed and step initialed.

2) IF inoperable ITS Support Feature does NOT result in ITS Supported Feature inoperability, THEN perform the following:

   a) N/A Steps 3 through 8 and step initialed.

   b) Sign and Date and step initialed.

   c) Forward worksheet to SM for review.

   d) Attach completed worksheet to the SIR.

EXAMINER'S NOTE: Incorrect section is referenced to Att. 10.11. Should be 10.12.

COMMENTS:

STEP 13: IF the component is an ITS Supported System Component, THEN review open Loss of Safety Function Worksheets (Attachment 10.12) for impact AND log in AUTO log to document review. [CAPR 193057] (Step 8.2.8) (Attachment 10.1, Section G) **STANDARD:** Candidate determines that there are no open Loss of Safety Function worksheets. **EXAMINER'S NOTE:** NONE COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 14: Initial the blank in Section "H" when the Load Dispatcher has been notified when the component inoperability could force plant shutdown or load reduction. [SOER 99-1. Rec. 1C] (Step 8.2.9) **STANDARD:** Candidate initials blank for Load Dispatcher notification. **EXAMINER'S NOTE: If requested, respond as the Load Dispatcher that notification has been received.** COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 15: Initial the blank in Section "I" when Planning and Scheduling has been notified when ITS/TRM/ODCM/RG 1.97 actions have been entered and plant shutdown is anticipated. (Step 8.2.10) **STANDARD:** Candidate initials the blank that Planning and Scheduling has been notified of anticipated plant shutdown. **EXAMINER'S NOTE: If requested, respond as Planning and Scheduling that notification has been received.** COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 16: IF the EIR is completed due to a Radiation Monitor, Flowrate Monitor or Tank Level Monitor inoperability, THEN enter the E&C Technician's name, time and date of notification in the blanks in Section "J." (Step 8.2.11) **STANDARD:** Candidate determines that the component inoperability does not involve any radiation monitor, flowrate monitor or tank level monitor and N/As the blanks in Section J of Attachment 10.1. **EXAMINER'S NOTE: None** COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 17: IF a Maintenance Rule System monitored for unavailability (Attachment 10.10, page 2) is affected, THEN record the Allowed Unavailability hours, subtract the actual unavailability hours, and record the remaining unavailability hours in Section "K." (NCR 102997) (Step 8.2.12) **STANDARD:** Candidate determines that System 4060-SW, SW Pump Trains is listed in Attachment 10.11, Page 2. Candidate determines that the Allowed Unavailability hours is **132** hours, the actual unavailability hours is **54.86** hours and the remaining unavailability hours is **77** hours. **132** Hours Allowed – **54.86** Hours Actual = **77** Hours Remaining will be entered in Section K of Attachment 10.1. **(Allowable band of 76.8 to 77.2 unavailability hours remaining)** **EXAMINER'S NOTE: Data will be provided to the candidate from the Maintenance Rule Database.** COMMENTS: **Maintenance Rule data can be found by accessing 'System Notebook' using Duke Application Environment (DAE) search, then choose 'RNP'. When the database opens move the desired system(s) from the list of available systems to the list of selected systems. From the list of System Notebook links click on M. R. System Specific Reports, then click on Performance Summary.**	**CRITICAL STEP** ___ SAT ___ UNSAT

STEP 18: IF the unavailability is unplanned and remaining unavailability hours are less the 72, THEN notify the RES Duty Manager and record the name, date, and time in Section "K." (NCR 102997) (Step 8.2.13) **STANDARD:** Candidate determines that the remaining hours is NOT less than 72 hours. **EXAMINER'S NOTE:** COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 19: The SM OR the CRS shall review the EIR AND sign AND date following completion in Section "L." (Step 8.2.14) **STANDARD:** Candidate will sign and date the Completed By portion of Attachment 10.1, Section L. **EXAMINER'S NOTE:** COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT
STEP 20: The comments section is used for documenting failed testing or changed equipment status. (Step 8.2.15) **STANDARD:** Candidate can place any comments needed or mark the comments as N/A or NONE. **EXAMINER'S NOTE:** COMMENTS:	**CRITICAL STEP** ___ SAT ___ UNSAT

STOP TIME: _____

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the Operator that this is NOT a time critical JPM.

INITIAL CONDITIONS:

- Unit operating at 100% RTP steady state
- SW Pump B removed from service at 1245 hours on today's date due to failed motor bearing
- No additional equipment is inoperable
- Current plans will return to service in 44 hours
- Work order # 47548629 has been initiated
- NCR # 407627 has been initiated

INITIATING CUES:

The CRS has directed you to complete the necessary OMM-007 attachment(s) for the inoperability of SW Pump B

Another SRO will perform the checklist of OMM-001-8, Equipment Out of Service Checklist and AD-OP-ALL-NGGC-1000, Conduct of Operations.

All necessary outside notifications will be made by the Shift Manager.

LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task: 02351100501 Review Surveillance Test Results to Ensure Acceptance Criteria are Met.

Alternate Path:

No

JPM #:

ILC-14 NRC JPM SRO A2

Candidate

SRO

K/A Rating (RO/SRO):

G 2.2.12 3.7/4.1

Task Standard:

Review OST-702-2 IAW OMM-015

Preferred Evaluation Location:

Simulator ___ Classroom ___X___

Preferred Evaluation Method:

Perform __X__ Simulate ___ ___

References:

- OST-702-2, SECONDARY SIDE INSERVICE VALVE TEST FOR MAIN FEEDWATER
- OMM-015, OPERATIONS SURVEILLANCE TESTING

Validation Time: **25** Minutes. **Time Critical:** **No** **Time Critical Time:** **N/A**

Candidate: _____ Name

(N/A if not time critical)

		Overall Time	**Critical Time**
SSN - -	Start:		Start:
	Finish:		Finish:
Performance Rating: circle one SAT UNSAT	**Performance Time** (min):		

Examiner: _____ Print Name _____ Signature _____ Date

COMMENTS:

Failure criteria is not identifying the critical tasks.

QUESTION DOCUMENTATION:

Question:

Response:

Tools/Equipment/Procedures Needed:

OMM-015 available for applicant reference.
OST-702-2

DIRECTIONS TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the operator Cue Sheet I provided you along with completed JPM material.

CANDIDATE INFORMATION:

Inform the Operator that this is NOT a time critical JPM.

INITIAL CONDITIONS:

- The unit has been placed in MODE 5 for a maintenance outage.
- RHR cooling is in service.
- OST-702-2, SECONDARY SIDE INSERVICE VALVE TEST FOR MAIN FEEDWATER, has just been completed.

INITIATING CUES:

You are the Admin SRO assigned to assist the CRS during this shift. He has directed you to review the completed OST-702-2. If there are no errors, sign the Approved By blank. If there are errors, identify and discuss them with the evaluator at the conclusion of your review.

START TIME: _____

EXAMINER'S NOTE: PROVIDE THE CANDIDATE(s) WITH HANDOUT FOR OST-702-2 and OMM-015.	
STEP 1: Review the completed procedure for completeness, missing initials/signatures, omissions, etc. STANDARD No errors identified.. **EXAMINER'S CUE:** **Provide handout for OST-702-2** **EXAMINER'S NOTE:** NONE COMMENTS:	___ SAT ___ UNSAT
STEP 2: Review the completed procedure for administrative and technical accuracy. **STANDARD:** **Error on ATTACHMENT 10.1, Page 2:** FCV-488 exceeds the LIMITING VALUE. Valve test is UNSAT and valve is INOPERABLE. **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS:	**Critical Task** ___ SAT ___ UNSAT

STEP 3: Review the completed procedure for administrative and technical accuracy. **STANDARD: Error on ATTACHMENT 10.4 Comments**: FW-V2-6B is NOT considered to be inoperable when the ERFIS indication is incorrect. (ACCEPTANCE CRITERIA 7.5.3). **EXAMINER'S CUE:** NONE **EXAMINER'S NOTE:** NONE COMMENTS: **END OF TASK**	**Critical Task** ___ SAT ___ UNSAT

STOP TIME: _____

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

CANDIDATE INFORMATION:

Inform the Operator that this is NOT a time critical JPM.

INITIAL CONDITIONS:

- The unit has been placed in MODE 5 for a maintenance outage.
- RHR cooling is in service.
- OST-702-2, SECONDARY SIDE INSERVICE VALVE TEST FOR MAIN FEEDWATER, has just been completed.

INITIATING CUES:

You are the Admin SRO assigned to assist the CRS during this shift. He has directed you to review the completed OST-702-2. If there are no errors, sign the Approved By blank. If there are errors, identify and discuss them with the evaluator at the conclusion of your review.

LICENSE EXAMINATION
JOB PERFORMANCE MEASURE

Task: 2344101203 Analyze indications to determine that an emergency plan event is in progress and classify the event IAW EAL MATRIX

Alternate Path: N/A

JPM #: ILC-14 NRC JPM
SRO A4

		RO/SRO
K/A Rating (s):	2.4.29	3.13/4.4
	2.4.44	2.4/4.4

Task Standard: Identifies Alert HA1.4 – Turbine failure generated missiles penetrates CST

Preferred Evaluation Location: **Preferred Evaluation Method:**

Simulator _____ Classroom ___X___ Perform __X__ Simulate _____

References:

EMERGENCY-ACTION-LEVEL-MATRIX-SH1 (ALL CONDITIONS MATRIX)
EMERGENCY-ACTION-LEVEL-MATRIX-SH3 (COLD CONDITIONS MATRIX)
EPCLA-04
EPCLA-01

Validation Time: **10** Minutes. **Time Critical:** Yes **Time Critical Time:** 15 Minutes

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Candidate: _____ (N/A if not time critical)
Name

	Overall Time	**Critical Time**
SSN - -	Start:	Start:
	Finish:	Finish:
Performance Rating: circle one SAT UNSAT	**Performance Time** (min):	

Examiner: _____ _____ _____
Print Name Signature Date

Comments

Step 1-3 Time Critical because events must be classified within 15 minutes of identification that an event is occurring

Step 2-3 Critical because the highest classification level must be identified within the 15 minute time limit.

Tools/Equipment/Procedures Needed:

EAL ALL CONDITIONS MATRIX HOT CONDITIONS MATRIX & EPCLA-04.

DIRECTIONS TO CANDIDATE:

When I tell you to begin, you are to classify an event IAW the EAL MATRIX and fill out the Emergency Notification Form. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you and report the EAL to be declared if any.

CANDIDATE INFORMATION:

Inform the Operator this is a **time critical** JPM. Both tasks are **time critical.**

INITIAL CONDITIONS:

- The Reactor was in MODE 1 at 100% power
- An unexpected opening of BKR 52/8 and 52/9 caused the turbine to over speed
- The over speed trip did not function
- This resulted in extensive turbine damage and multiple components ejecting from the turbine enclosure
- Turbine blades have been reported in the side of the CST and the CST is now leaking
- This is a **DRILL**

INITIATING CUES:

You are the CRS and the SM is not available. Classify this event IAW the EAL MATRIX and fill out the Emergency Notification Form. Mark the EAL MATRIX appropriately. If the candidate asks, inform them that the time of the trip was the start time of the JPM.

.

TIME CRITICAL

START TIME: _____ TIME CRITICAL START TIME: _____

STEP 1: Obtain the EAL ALL CONDITIONS & HOT CONDITIONS MATRIX STANDARD: Candidate obtains a copy of the EAL ALL CONDITIONS & HOT CONDITIONS MATRIX EXAMINER'S NOTE**:** **NONE** EXAMINER'S CUE**:** **NONE** COMMENTS:	**CRITICAL STEP** ____ SAT ____ UNSAT
STEP 2: Identifies condition met on the ALL CONDITIONS MATRIX. STANDARD: Candidate reviews EAL ALL CONDITIONS MATRIX and identifies HA1.4 Turbine failure generated missiles result in visible damage to CST. EXAMINER'S NOTE**: NONE** EXAMINER'S CUE**: NONE** COMMENTS:	**CRITICAL STEP** ____ SAT ____ UNSAT
STEP 3: Declares the highest EAL Classification identified within 15 minutes of start time. STANDARD: Candidate declares Alert HA1.4 within 15 minutes of start time. EXAMINER'S NOTE**:** **Candidate will declare a Alert and present their classification to you. This will stop the 15 minute clock for the declaration portion of the JPM.** EXAMINER'S CUE**:** None COMMENTS:	**CRITICAL STEP** ____ SAT ____ UNSAT
Time Critical Stop Time for EAL Classification: _____ (15 minute limit)	

Examiner' CUE: Present the candidate with Cue Sheet Handout B for the JPM task of completing the Emergency Notification Form and a copy of procedure EPNOT-01. Record the start time once the candidate has read and understands the Cue Sheet.	
Time Critical Start Time for EAL Notification: _____	
STEP 4: Obtain EPNOT-01, Attachment 10.5, Nuclear Power Plant Emergency Notification Form. **STANDARD:** Copies Attachment from procedure or pulls it from a file. **EXAMINER'S NOTE: The Examiner will provide a copy of EPNOT-01 to the candidate.** COMMENTS:	___ SAT ___ UNSAT
STEP 5: Enter Line 1 information **STANDARD:** Marks **DRILL** and Message #1. **EXAMINER'S NOTE: Ensure that DRILL is marked. ACTUAL EVENT is only used during a real emergency.** COMMENTS:	___ SAT ___ UNSAT
STEP 6: Enter Line 2 information **STANDARD:** Marks **INITIAL** **EXAMINER'S NOTE: NONE** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT

STEP 7: Enter Line 3 information **STANDARD:** Enters **H.B. Robinson** as the Site and enters CONFIRMATION PHONE NUMBER. **EXAMINER'S NOTE: Identifying the site as H.B. Robinson is critical. Listing the proper confirmation telephone number is NOT critical** **EXAMINER'S CUE: When candidate requests the ERO phone list, inform the candidate that the Confirmation Phone Number is 843-383-3685.** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
STEP 8: Enter Line 4 information **STANDARD:** Marks **ALERT** as the Emergency Classification**.** Based on EAL # **HA1.4** EAL Description **– Turbine failure-generated missiles result in any visible damage to or penetration of any table H-1 area (CST)** **EXAMINER'S NOTE: NONE** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
STEP 9: Enter Line 5 Protective Action Recommendation, information **STANDARD:** Marks **NONE.** **EXAMINER'S NOTE: NONE** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT

STEP 10: Enter Line 6, Emergency Release, information **STANDARD:** Marks **None** **EXAMINER'S NOTE: NONE** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
STEP 11: Enter Line 7, Release Significance, information **STANDARD:** Marks **Not applicable** **EXAMINER'S NOTE: NONE** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
STEP 12: Enter Line 8, Event Prognosis, information **STANDARD:** Marks **Stable.** **EXAMINER'S NOTE: NONE** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
STEP 13: Enter Line 9, Meteorological Data, information **STANDARD:** Enters data that was given in the initial conditions: Wind Direction 220 degrees Wind Speed 18 mph Precipitation **0** Stability Class "**D**" **EXAMINER'S NOTE: NONE** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT

STEP 14: Enter Line 10 information **STANDARD:** Marks Block A, DECLARATION: Enters today's date for **Date** and Stop time for EAL Classification for **Time**. **EXAMINER'S NOTE: Date should be today's date. Time should be the time they recorded for their EAL Classification** **EXAMINER'S CUE: If asked inform candidate to use today's date.** **Use Time Critical Stop Time for EAL Classification for time of Declaration.** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
STEP 15: Enter Line 11 information **STANDARD:** Marks **Unit 2.** **EXAMINER'S NOTE: NONE** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
STEP 16: Enter Line 12, UNIT STATUS, information **STANDARD:** Enters Shutdown Time: Enters start time for EAL Classification on today's date. Candidate should select UNIT 2 and mark power level of 0%. **EXAMINER'S NOTE: Date should be today's date. The time that PART A of this JPM commenced(the time they started their EAL declaration)** **EXAMINER'S CUE: Inform candidate to use today's date. Use start time for EAL Classification for time of unit shutdown.** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT

STEP 17: Enter Line 13, REMARKS, information **STANDARD:** Enters information describing accident from EAL Matrix **EXAMINER'S NOTE: May leave LINE 13, REMARKS, blank or enter EAL information or additional information.** COMMENTS:	___ SAT ___ UNSAT
STEP 18: Line 17, APPROVAL by SEC **STANDARD:** Completes Line 17 with **Signature, Title, Time, and Date** **EXAMINER'S NOTE: Time and Date are the current time and date of approval. If candidate requests information with respect to time and date inform candidate to use the ACTUAL CURRENT time and date.** COMMENTS:	**Critical Step** ___ SAT ___ UNSAT
Time Critical Stop Time for EAL Notification:_____ (15 minute limit)	
END OF TASK	
Terminating Cue: EAL classification has been determined and Emergency Notification Form has been prepared and approved.	

HANDOUT A

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

INITIAL CONDITIONS:

- The Reactor was in MODE 1 at 100% power
- An unexpected opening of BKR 52/8 and 52/9 caused the turbine to over speed
- The over speed trip did not function
- This resulted in extensive turbine damage and multiple components ejecting from the turbine enclosure
- Turbine blades have been reported in the side of the CST and the CST is now leaking
- This is a **DRILL**

INITIATING CUES:

You are the CRS and the SM is not available. Classify this event IAW the EAL MATRIX and fill out the Emergency Notification Form. Mark the EAL MATRIX appropriately. If the candidate asks, inform them that the time of the trip was the start time of the JPM.

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HANDOUT B

CANDIDATE CUE SHEET
(TO BE RETURNED TO EXAMINER UPON COMPLETION OF TASK)

CANDIDATE INFORMATION:

Inform the Candidate that this portion of the JPM is time critical.

INITIAL CONDITIONS:

- **All conditions from Handout A remain in effect.**
- **Wind Direction is 220°.**
- **Wind Speed is 18 mph.**
- **Precipitation 0**
- **Stability Class** "**D**"
- **Emergency Dose Projections are not yet available.**
- **Release is NOT in progress.**
- This is a **DRILL**

INITIATING CUES:

The Emergency Communicator is NOT available. You, as the Control Room Site Emergency Coordinator (SEC), must manually complete the Emergency Notification Form (ENF) from procedure EPNOT-01, CR/EOF Emergency Communicator.

TIME CRITICAL