



St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

**DETERMINE TIME SDC ENTRY CONDITIONS ARE
REQUIRED BASED ON AVAILABLE CST LEVEL –
UNIT 1**

NRC A1

Developed/Revised by: _____ Date _____

Training Management Approval: _____ Date _____

JOB PERFORMANCE MEASURE

Task: Given a set of conditions, determine time SDC entry conditions are required based on available CST level– Unit 1.

Faulted JPM? No

Facility JPM #:

K/A: 2.1.25 Ability to interpret reference materials, such as graphs, curves, tables, etc.

K/A Rating(s): 3.9 / 4.2

Duty Area(s): N/A

Task Information: 07200105

Task Standard:

Determine time SDC entry conditions are required based on available CST level

Evaluation Location:

Performance Level:

<u>Simulator</u>	<u>In Plant</u>	<u>Lab</u>	<u>Other</u>	<u>Perform</u>	<u>Simulate</u>	<u>Discuss</u>
			x	X		

References:

- 1-EOP-99, Appendices/Figures/Tables/Data Sheets, Revision 41

Validation Time: 10 minutes

Time Critical: NO

Tools/Equipment/Procedures Needed:

- 1-EOP-99, Appendices/Figures/Tables/Data Sheets, Data Sheet 1, Figures 3, 4, 5, 6, 7 and 8
- Calculator, Straight edge

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 time SDC entry conditions are required based on available CST level – Unit 1.
- The performance level to be used for this JPM is Perform.
- 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 1 reactor trip occurred from 100% power two (2) hours ago.
- One (1) RCP in EACH loop is operating.
- Reactor Coolant System Tcold is **530°F**.
- Condensate Storage Tank (CST) level is **25 feet**.

INITIATING CUES:

The Unit Supervisor has directed you to perform:

1-EOP-99, Data Sheet 1, 'Determination Of Condensate Required to remove Decay Heat and RCP Heat' to determine the time SDC entry is required.

JOB PERFORMANCE MEASURE

START TIME: _____

DATA SHEET 1 <u>DETERMINATION OF CONDENSATE REQUIRED TO REMOVE DECAY HEAT AND RCP HEAT</u>	
<p><u>STEP 1 (1):</u> RECORD the current CST level below.</p> <p><u>STANDARD:</u> <u>RECORDS</u> 25 feet on Data Sheet 1 step 3.</p> <p style="text-align: center;">EXAMINER'S NOTE: PROVIDE Data Sheet 1 and Figures 3, 4, 5, 6, 7, and 8</p> <p><u>COMMENTS:</u></p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p><u>STEP 2 (2):</u> DETERMINE the number of CST feet needed to cool down from present RCS temperature to 300°F from Figure 3 and RECORD below.</p> <p><u>STANDARD:</u> <u>RECORDS</u> 3.9 feet on step 3, 'Figure 3 Value'</p> <p style="text-align: center;">EXAMINER'S NOTE: Acceptable band 3.8 to 4.0 feet</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
<p><u>STEP 3 (3):</u> SUBTRACT Figure 3 value from current CST level. The result is CST inventory available for RCS cooldown.</p> <p><u>STANDARD:</u> <u>RECORD</u> 21.1 on step 3 'Available CST level'</p> <p style="text-align: center;">EXAMINER'S NOTE: Acceptable band 21.2 to 21.0 CST level</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>

JOB PERFORMANCE MEASURE

<p>STEP 4 (4): Utilize the available CST level value from above <u>and</u> DETERMINE the time until SDC entry conditions are required using Figure 4, 5, 6, 7, or 8 depending on the number of RCPs that are operating.</p> <p>STANDARD: <u>DETERMINES</u> Figure 6 is used based on 2 RCPs running.</p> <p><u>DETERMINES</u> 17 hours until SDC entry is required</p> <p>EXAMINER'S NOTE: Acceptable range 16 to 18 hours based on 2 hours after shutdown and 21.1 feet available in CST.</p> <p>EXAMINER'S CUE: When Data Sheet 1 is handed back, STATE: "This JPM is complete."</p> <p><u>COMMENTS:</u></p> <p style="text-align: center; margin-top: 20px;">END OF TASK</p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
--	---

STOP TIME: _____

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

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

INITIAL CONDITIONS:

- A Unit 1 reactor trip occurred from 100% power two (2) hours ago.
- One (1) RCP in EACH loop is operating.
- Reactor Coolant System Tcold is **530°F**.
- Condensate Storage Tank (CST) level is **25 feet**.

INITIATING CUES:

The Unit Supervisor has directed you to perform:

1-EOP-99, Data Sheet 1, 'Determination Of Condensate Required to remove Decay Heat and RCP Heat' to determine the time SDC entry is required.



St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

**Manually Calculate Linear Heat Rate Using Excore
Detectors – Unit 2**

NRC A2R

Developed/Revised by: _____ Date _____

Training Management Approval: _____ Date _____

JOB PERFORMANCE MEASURE

Task: DCS indication of the incore detectors has failed. Given a set of conditions, perform TS surveillances 4.2.1.2 and 4.2.1.3 – Unit 2.

Faulted JPM? No

Facility JPM #: New

K/A: 2.1.25 Ability to interpret reference materials, such as graphs, curves, tables, etc.

K/A Rating(s): 3.9 / 4.2

Duty Area(s): N/A

Task Information: 07200105

Task Standard:

Calculate Linear Heat Rate limits and determine if plant is operating within allowable limits.

Evaluation Location:

Performance Level:

<u>Simulator</u>	<u>In Plant</u>	<u>Lab</u>	<u>Other</u> x	<u>Perform</u> X	<u>Simulate</u>	<u>Discuss</u>
------------------	-----------------	------------	-------------------	---------------------	-----------------	----------------

References:

- 0-NOP-100.03, Monitoring Linear Heat Rate, Revision 6
- Plant Physics Curve Book

Validation Time: 20 minutes

Time Critical: NO

Tools/Equipment/Procedures Needed:

- 0-NOP-100.03, Monitoring Linear Heat Rate, Revision 6
- COLR Figure 3.2-2 and 3.2-3.
- Calculator, Straight edge

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: Manually Calculate Linear Heat Rate Using Excore Detectors.
- The performance level to be used for this JPM is Perform.
- 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 has returned to 100% power from 50% power two (2) hours ago.
- Reactor Engineering has provided that F_r^T is currently at 1.74.
- ASI is at -0.02.
- Incore instrumentation feed to DCS has been determined to be failed and the Incore Instrumentation system has been declared inoperable.
- I&C has been contacted. Repairs are expected to be complete within 12 hours.

INITIATING CUES:

The Unit Supervisor has directed you to perform:

Section 6.3 of 0-NOP-100.03, Monitoring Linear Heat Rate

JOB PERFORMANCE MEASURE

START TIME: _____

Section 6.3 , <u>Monitoring Linear Heat Rate</u>	
<p>STEP 1 (6.3.1): M is defined as the maximum allowable Thermal Power Level for existing RCP combination (M=100% with four RCPs in operation).</p> <p style="margin-left: 20px;">A. Since no less than 4 RCPs are allowed for power operation, M=100%.</p> <p style="margin-left: 20px;">B. The value for N in the M x N equation becomes the only factor for determining the new limits of COLR Figure 3.2-2 in Appendix E of Plant Physics Curve Book.</p> <p>STANDARD: Acknowledge information in step</p> <p>COMMENTS:</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 2 (6.3.2): DETERMINE the value for N and record below.</p> <p style="margin-left: 20px;">A. N is defined as the maximum allowable fraction of Rated Thermal Power as determined by use of COLR Figure 3.2-3 in Appendix E of the Plant Physics Curve Book.</p> <p style="margin-left: 20px;">B. Refer to the Plant Curve Book or Reactor Engineering for the latest F_r^T value.</p> <p>STANDARD: <u>DETERMINES</u> N=0.94.</p> <p style="margin-left: 20px;">EXAMINER'S NOTE: Acceptable range 0.935 to 0.945.</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>

JOB PERFORMANCE MEASURE

<p>STEP 3 (NOTE):</p> <ul style="list-style-type: none"> • Compliance with COLR Figure 3.2-2 found in Appendix E Plant Physics Curve Book precludes operation at a power level greater than 85% for Unit 1. • COLR Figure 3.2-2 envelope is more restrictive than either COLR Figure 3.2-4 or Tech Spec Figure 2.2-2 for either unit. <p>STANDARD: Acknowledges Note.</p> <p>COMMENTS:</p>	<p>____ SAT</p> <p>____ UNSAT</p>
<p>STEP 4 (6.3.3): CALCULATE the breakpoints to COLR Figure 3.2-2 for either unit, using the value of N in Step 6.3.2 as follows:</p> <p>STANDARD: Use Unit 2 Values</p> <ol style="list-style-type: none"> 1. $(-.08, 1.0 \times N) = (-.08, \underline{\quad}) = (-.08, .94 \text{ .935 to .945})$ 2. $(.08, 1.0 \times N) = (-.08, \underline{\quad}) = (.08, .94 \text{ .935 to .945})$ 3. $(-.50, .50 \times N) = (-.08, \underline{\quad}) = (-.50, \mathbf{0.47 \text{ .4675 to .4725}})$ 4. $(.50, .50 \times N) = (-.08, \underline{\quad}) = (.50, \mathbf{0.47 \text{ .4675 to .4725}})$ <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>____ SAT</p> <p>____ UNSAT</p>
<p>STEP 5 (6.3.3.C):</p> <ul style="list-style-type: none"> • RE-PLOT COLR Figure 3.2-2 as required to reflect the corrections made above on a sheet of graph paper. <p>STANDARD: See attached graph.</p> <p>COMMENTS:</p>	<p>____ SAT</p> <p>____ UNSAT</p>

JOB PERFORMANCE MEASURE

<p><u>STEP 6 (6.3.4):</u> <u>If</u> it is expected that the LHR will be monitored using the excore mode for LESS than 24 hours, <u>Then</u> VERIFY Axial Shape Index (ASI) is controlled within the boundaries of the curve plotted in Step 6.3 above.</p> <p><u>STANDARD:</u> Determines that current ASI is outside of the boundaries, because power is above the allowable limit.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
<p><u>STEP 7 (6.3.5):</u> <u>If</u> it is expected that the LHR will be monitored using the excore mode for LESS than 24 hours, <u>Then</u> REQUEST I&C to adjust the Power Ratio Calculator ASI alarm setpoints to within the limits calculated in step 6.3 for the appropriate unit</p> <p><u>STANDARD:</u> Determines from Initial Conditions that DCS is expected to be restored within 12 hours.</p> <p><u>COMMENTS:</u></p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p>END OF JPM</p>	

STOP TIME: _____

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

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

INITIAL CONDITIONS:

- Unit 2 has returned to 100% power from 50% power two (2) hours ago.
- Reactor Engineering has provided that F_r^T is currently at 1.74.
- ASI is at -0.02.
- Incore instrumentation feed to DCS has been determined to be failed and the Incore Instrumentation system has been declared inoperable.
- I&C has been contacted. Repairs are expected to be complete within 12 hours.

INITIATING CUES:

The Unit Supervisor has directed you to perform:

Section 6.3 of 0-NOP-100.03, Monitoring Linear Heat Rate



St. Lucie Nuclear Plant

Operations Training

JOB PERFORMANCE MEASURE

**Manually Calculate Linear Heat Rate Using Excore
Detectors – Unit 2**

NRC A2S

Developed/Revised by: _____ Date _____

Training Management Approval: _____ Date _____

JOB PERFORMANCE MEASURE

Task: DCS indication of the incore detectors has failed. Given a set of conditions, perform TS surveillances 4.2.1.2 and 4.2.1.3 – Unit 2.

Faulted JPM? No

Facility JPM #: New

K/A: 2.1.25 Ability to interpret reference materials, such as graphs, curves, tables, etc.

K/A Rating(s): 3.9 / 4.2

Duty Area(s): N/A

Task Information: 07200105

Task Standard:

Calculate Linear Heat Rate limits and determine if plant is operating within allowable limits.

Evaluation Location:

Performance Level:

<u>Simulator</u>	<u>In Plant</u>	<u>Lab</u>	<u>Other</u> x	<u>Perform</u> X	<u>Simulate</u>	<u>Discuss</u>
------------------	-----------------	------------	-------------------	---------------------	-----------------	----------------

References:

- 0-NOP-100.03, Monitoring Linear Heat Rate, Revision 6
- Plant Physics Curve Book

Validation Time: xx minutes

Time Critical: NO

Tools/Equipment/Procedures Needed:

- 0-NOP-100.03, Monitoring Linear Heat Rate, Revision 6
- COLR Figure 3.2-2 and 3.2-3.
- Calculator, Straight edge

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: Manually Calculate Linear Heat Rate Using Excore Detectors.
- The performance level to be used for this JPM is Perform.
- 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 has returned to full power from 50% power two (2) hours ago.
- Reactor Engineering has provided that F_r^T is currently at 1.74.
- ASI is at -0.02.
- Incore instrumentation feed to DCS has been determined to be failed and the Incore Instrumentation system has been declared inoperable.
- I&C has been contacted. Repairs are expected to be complete within 12 hours.

INITIATING CUES:

The Unit Supervisor has directed you to perform:

Section 6.3 of 0-NOP-100.03, Monitoring Linear Heat Rate

JOB PERFORMANCE MEASURE

START TIME: _____

Section 6.3 , <u>Monitoring Linear Heat Rate</u>	
<p><u>STEP 1 (6.3.1):</u> M is defined as the maximum allowable Thermal Power Level for existing RCP combination (M=100% with four RCPs in operation).</p> <p style="margin-left: 40px;">A. Since no less than 4 RCPs are allowed for power operation, M=100%.</p> <p style="margin-left: 40px;">B. The value for N in the M x N equation becomes the only factor for determining the new limits of COLR Figure 3.2-2 in Appendix E of Plant Physics Curve Book.</p> <p><u>STANDARD:</u> Acknowledge information in step</p> <p><u>COMMENTS:</u></p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p><u>STEP 2 (6.3.2):</u> DETERMINE the value for N and record below.</p> <p style="margin-left: 40px;">A. N is defined as the maximum allowable fraction of Rated Thermal Power as determined by use of COLR Figure 3.2-3 in Appendix E of the Plant Physics Curve Book.</p> <p style="margin-left: 40px;">B. Refer to the Plant Curve Book or Reactor Engineering for the latest F_T value.</p> <p><u>STANDARD:</u> <u>DETERMINES</u> N=0.94.</p> <p style="margin-left: 40px;">EXAMINER'S NOTE: Acceptable range 0.935 to 0.945.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>

JOB PERFORMANCE MEASURE

<p><u>STEP 3 (NOTE):</u></p> <ul style="list-style-type: none"> Compliance with COLR Figure 3.2-2 found in Appendix E Plant Physics Curve Book precludes operation at a power level greater than 85% for Unit 1. COLR Figure 3.2-2 envelope is more restrictive than either COLR Figure 3.2-4 or Tech Spec Figure 2.2-2 for either unit. <p><u>STANDARD:</u> Acknowledges Note.</p> <p><u>COMMENTS:</u></p>	<p>____ SAT</p> <p>____ UNSAT</p>
<p><u>STEP 4 (6.3.3):</u> CALCULATE the breakpoints to COLR Figure 3.2-2 for either unit, using the value of N in Step 6.3.2 as follows:</p> <p><u>STANDARD:</u> Use Unit 2 Values</p> <ol style="list-style-type: none"> 1. $(-.08, 1.0 \times N) = (-.08, \underline{\quad}) = (-.08, .94 \text{ .935 to .945})$ 2. $(.08, 1.0 \times N) = (-.08, \underline{\quad}) = (.08, .94 \text{ .935 to .945})$ 3. $(-.50, .50 \times N) = (-.08, \underline{\quad}) = (-.50, 0.47 \text{ .4675 to .4725})$ 4. $(.50, .50 \times N) = (-.08, \underline{\quad}) = (.50, 0.47 \text{ .4675 to .4725})$ <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p>____ SAT</p> <p>____ UNSAT</p>
<p><u>STEP 5 (6.3.3.C):</u></p> <ul style="list-style-type: none"> RE-PLOT COLR Figure 3.2-2 as required to reflect the corrections made above on a sheet of graph paper. <p><u>STANDARD:</u> See attached graph.</p> <p><u>COMMENTS:</u></p>	<p>____ SAT</p> <p>____ UNSAT</p>

JOB PERFORMANCE MEASURE

<p><u>STEP 6 (6.3.4):</u> If it is expected that the LHR will be monitored using the excore mode for LESS than 24 hours, <u>Then</u> VERIFY Axial Shape Index (ASI) is controlled within the boundaries of the curve plotted in Step 6.3 above.</p> <p><u>STANDARD:</u> Determines that current ASI is outside of the boundaries, because power is above the allowable limit.</p> <p><u>COMMENTS:</u></p>	<p>CRITICAL STEP</p> <p style="text-align: right;">_____ SAT</p> <p style="text-align: right;">_____ UNSAT</p>
<p><u>STEP 7 (6.3.5):</u> If it is expected that the LHR will be monitored using the excore mode for LESS than 24 hours, <u>Then</u> REQUEST I&C to adjust the Power Ratio Calculator ASI alarm setpoints to within the limits calculated in step 6.3 for the appropriate unit</p> <p><u>STANDARD:</u> Determines from Initial Conditions that DCS is expected to be restored within 12 hours.</p> <p><u>COMMENTS:</u></p>	<p style="text-align: right;">_____ SAT</p> <p style="text-align: right;">_____ UNSAT</p>
<p><u>STEP 8 (N/A):</u> Determine actions required by Technical Specifications.</p> <p><u>STANDARD:</u> Determines that TS 3.2.1, Linear Heat Rate, is applicable.</p> <p>Surveillance 4.2.1.4, Incore Detector Monitoring System has a note # that states that if the Incore system is inoperable, reduce power to M x N within 4 hours and monitor linear heat rate in accordance with Specification 4.2.1.3.</p> <p>Therefore power must be reduced to less than 94% within 4 hours or in hot standby within the next 6 hours.</p> <p>Examiner Note; This will require a followup question to get the applicant to perform the TS review.</p> <p><u>COMMENTS:</u></p> <p style="text-align: center; margin-top: 20px;">END of JPM</p>	<p>CRITICAL STEP</p> <p style="text-align: right;">_____ SAT</p> <p style="text-align: right;">_____ UNSAT</p>

STOP TIME: _____

JOB PERFORMANCE MEASURE
CANDIDATE CUE SHEET

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

INITIAL CONDITIONS:

- Unit 2 has returned to full power from 50% power two (2) hours ago.
- Reactor Engineering has provided that F_r^T is currently at 1.74.
- ASI is at -0.02.
- Incore instrumentation feed to DCS has been determined to be failed and the Incore Instrumentation system has been declared inoperable.
- I&C has been contacted. Repairs are expected to be complete within 12 hours.

INITIATING CUES:

The Unit Supervisor has directed you to perform:

Section 6.3 of 0-NOP-100.03, Monitoring Linear Heat Rate

REGION II
ST. LUCIE NUCLEAR PLANT
INITIAL LICENSE EXAMINATION
ADMINISTRATIVE JPM

Develop ECO for 1A AFW Pump - UNIT 1

A3

APPLICANT _____

EXAMINER _____

Developed/Revised by: _____ Date _____

Training Management Approval: _____ Date _____

**REGION II
ST LUCIE NUCLEAR PLANT
INITIAL LICENSE EXAMINATION
ADMINISTRATIVE JPM**

Develop ECO for 1A AFW pump

Directions to the applicant for Administrative JPMS:

I will explain the initial conditions and state the task to be performed. You will be allowed to use any reference normally available in the Control Room to complete the task. Ensure you indicate to me when you finish your assigned task by returning the material needed for the task that I provided to you.

Initial Conditions

Unit 1 is at 100% power. The 1A AFW pump has cracked shaft (pump) and is to be repaired. No other equipment is out of service.

Initiating Cue

On the attached matrix:

1. Develop an Equipment Clearance Order for the 1A AFW.
2. Identify any applicable Technical Specification actions associated with removing the 1A AFW pump from service.

Component	Name	Position	Tag (type)
1A AFW Control Room Pump Switch	1-CS-629	Off	Info Tag
*Breaker 1-20212	1A AFW Pump	Racked Out Plus	Danger
Breaker 1-20212	Trip Fuse	Removed	N/A
Breaker 1-20212	Close Fuse	Removed	N/A
*V9108	1A AFW Pump Discharge Valve	Locked Closed Plus	Danger
*V12498	1A AFW Pump Suction Valve	Locked Closed Plus	Danger
*V09100	1A AFW Pump Recirc Valve	Locked Closed Plus	Danger
NOTE: The following vent(s) may be opened and tagged but only ONE VENT is needed to be opened to meet the critical step. #As per Ops Policy 406, 'Vents and Drains do not require a danger tag. It is preferred, but not required'.			
V09886	1A AFW Pump Casing Vent	Open	#Danger
V12425	1A AFW Pump Suct. Vent	Open	#Danger
V12426	1A AFW Pump Suct. Vent	Open	#Danger
NOTE: Research of actual Clearance order for this pump indicates there is no casing drain. Clearance order has caution stating when casing flange breaks free there will be a rush of water due to unable to drain pump casing.			

***Technical Specification:**

3.7.1.2.a. Restore within 72 Hours or HSB next 6 hours HSD the following 6 hours
***Critical Step**

#As per Ops Policy 406, 'Vents and Drains do not require a danger tag. It is preferred, but not required'

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

Directions to the candidate for Administrative JPMS:

I will explain the initial conditions and state the task to be performed. You will be allowed to use any reference normally available in the Control Room to complete the task. Ensure you indicate to me when you finish your assigned task by returning the material needed for the task that I provided to you.

Initial Conditions

Unit 1 is at 100% power. The 1A AFW pump has cracked shaft (pump) and is to be repaired. No other equipment is out of service.

Initiating Cue

On the attached matrix:

1. Develop an Equipment Clearance Order for the 1A AFW.
2. Identify any applicable Technical Specification actions associated with removing the 1A AFW pump from service.

ST. LUCIE NUCLEAR PLANT
ADMINISTRATIVE JPM

St. Lucie Radiation Requirements

RO A4

APPLICANT _____

EXAMINER _____

Developed/Revised by: _____ Date _____

Training Management Approval: _____ Date _____

**ST LUCIE NUCLEAR PLANT
INITIAL LICENSE EXAMINATION
ADMINISTRATIVE JPM
A-4**

ST. LUCIE RADIATION REQUIREMENTS

Directions to the applicant for Administrative JPMs:

I will explain the initial conditions and state the task to be performed. You will be allowed to use any reference need to complete the task. Ensure you indicate to me when you finish your assigned task by returning the material needed for the task that I provided you.

Initial Conditions:

Unit 1 is in a refueling outage. During the Upper Guide Structure (UGS) lift, it was identified that three (3) CEA's have become caught on the UGS and were being withdrawn. The UGS was set back down in the reactor vessel and a recovery plan was developed.

The recovery plan will take 40 minutes to complete (not including setup and cleanup) in a 2900 mR/hr field. It has been decided that this does NOT constitute a Planned Special Exposure (PSP). All four workers' current year's exposures are documented and up to date.

Worker 1 must enter the work area 5 minutes prior to the rest of the group to set up the equipment. He will leave at the end of the recovery plan.

Worker 2 will enter the work area after Worker 1 has setup the equipment. He will remain in the work area for the entire recovery plan and will spend 10 additional minutes cleaning up.

Worker 3 will enter the work area after the equipment is set up and will remain for the entire recovery plan.

Worker 4 will enter the work area after the equipment is set up and will leave 10 minutes into the recovery plan.

Below are the workers' dose records:

Worker	Employer	Age	Lifetime Dose (TEDE)	Current Year FPL Dose at PSL (TEDE)	Current Year Dose at all sites (TEDE)
1	Contractor	22	22200 mR	50 mR	825 mR
2	Contractor	36	35500 mR	450 mR	2550 mR
3	FPL	35	22750 mR	600 mR	600 mR
4	FPL	40	3550 mR	250 mR	300 mR

Initiating Cue:

1. What dose would be received for each person?
2. Which worker(s) is(are) allowed to perform the recovery plan in accordance with approved FPL procedures?
3. What highest level of managerial approval is required for each worker in accordance with approved FPL procedures?

EXAM KEY

Worker	Dose (mR)	Predicted Site Dose (mR)	Predicted Annual Dose (mR)	Allowable	Special Approval
1	2174 - 2176	2225	2300	Yes	PGM
2	2416 - 2417	2867	5067	No	N/A
3	1933 - 1934	2534	2534	Yes	Site VP
4	483 - 484	733	783	Yes	None

Per HP-2, FPL Health Physics Manual, the following information is provided for clarification:

- Worker 1 exceeds the 1 R limit annual site dose, so at least the PGM approval is required. He does not exceed the 2.5 R (site) or 3 R (all sites) dose, so no higher approval is required.
- Worker 2 exceeds the NRC limit of 5 R for the year. This is not an emergency or PSE so no extension is available.
- Worker 3 exceeds the 2.5 R site dose, this requires VP approval.
- Worker 4 does not exceed the 1R site dose or 3 R all-site dose. No further approvals are required.

**REGION II
ST. LUCIE NUCLEAR PLANT
INITIAL LICENSE EXAMINATION
ADMINISTRATIVE JPM**

RESPOND TO A TORNADIC EVENT

(SRO)

A5S

Portions of this JPM are TIME CRITICAL

**REGION II
ST LUCIE NUCLEAR PLANT
INITIAL LICENSE EXAMINATION
ADMINISTRATIVE JPM**

RESPOND TO A TORNADIC EVENT

KA Statement: 2.4.29 Knowledge of the emergency plan

KA #: 3.1 / 4.4

References: EPIP-01, 'Classification of Emergencies'
EPIP-02, 'Duties and Responsibilities of the Emergency Coordinator'
EPIP-08, 'Off-Site Notifications and Protective Action
Recommendations'

Candidate: _____
Name

Validation Time: 30 minutes

Start Time: _____ **Finish Time:** _____

Performance Rating: Sat _____ Unsat _____

Examiner: _____ **Signature:** _____

Comments

**REGION II
ST LUCIE NUCLEAR PLANT
INITIAL LICENSE EXAMINATION
ADMINISTRATIVE JPM**

RESPOND TO A TORNADIC EVENT

Directions to the candidate for Administrative JPMS:

I will explain the initial conditions and state the task to be performed. You will be allowed to use any reference needed to complete the task. Ensure you indicate to me when you finish your assigned task by returning the material needed for the task that I provided to you.

Initial Conditions

Both Units are at 100% power.

A tornado warning has been issued for St. Lucie County. Multiple funnel clouds have been sighted near PSL. All site personnel have been told to seek shelter.

You are the Shift Manager. You are located in the Unit 1 Control Room. A load noise is heard outside of the Control Room door.

At time now, all off-site power is lost. Unit 1 trips. Both EDGs start and load on to their respective safety busses. Annunciator G-47, CST Level Low-Low Alarm comes in immediately.

At time now + 3 minutes 30 seconds, Annunciators G-36, 37, and 38 (1A (1B, 1C) AFW Pump Suction Pressure Low) alarm.

Initiating Cue

You are the SM, located in Unit 1.

You are to:

- Classify the event.
- Complete the State of Florida Notification Form

NOTE: Portions of this JPM are time critical

Portions of this JPM are time critical

START TIME: _____

	TIME CRITICAL STEP
<p align="center">EPIP-01 Classification of Emergencies</p> <p><u>STEP 1:</u> 5.3 Classifying the Event:</p>	
<p><u>STANDARD:</u> IMPLEMENTS EPIP-01 Classification of Emergencies and DETERMINES classification of ALERT under HA1 Natural or Destructive Phenomena Affecting the PROTECTED AREA</p>	<p>_____ SAT</p> <p>_____ UNSAT</p>
<p>EXAMINER'S CUE: NONE EXAMINER'S NOTE: Applicant should refer to Attachment 1 and classify the event at this time.</p>	
<p>CLASSIFICATION TIME _____</p>	
<p>Must be ≤ 15 minutes from time noted in step 1 of this JPM. This is also the 15 minute start time to notify the State.</p>	
<p>EXAMINER'S CUE: None</p>	
<p><u>COMMENTS:</u></p> <p>Note at this point the Examiner should tell the applicant to fill out the paperwork to contact the state.</p> <p>Supply to the applicant that the wind direction indicates 454 degrees.</p>	

**ATTACHMENT 1
FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM**

STEP 2 (Line 1):

1.* A. THIS IS A DRILL B. THIS IS AN EMERGENCY

STANDARD: Checks A

EXAMINER'S CUE: NONE
EXAMINER'S NOTE: Per EPIP-08, Attachment 1A step 1, drill, exercises or tests, each message shall be checked "this is a drill"

COMMENTS:

**CRITICAL
STEP**

____ SAT

____ UNSAT

STEP 3 (Line 2):

2. A. Date: ___ / ___ / ___ B. * Contact Time: _____ C. Reported by: (Name) _____
D. Message Number: _____ E. Reported from: Control Room TSC EOF
F. Initial / New Classification OR Update Notification

STANDARD: A. Today's Date
B. Time contact made – left blank at this time
C. Applicant's name
D. Message # 1
E. Control Room
F. Initial / New Classification

EXAMINER'S CUE: NONE
EXAMINER'S NOTE: Part B Contact time must be within 15 minutes of the emergency classification time
EXAMINER'S NOTE: Contact time shall be filled in when contact is made with the state.

COMMENTS:

**CRITICAL
STEP**

____ SAT

____ UNSAT

<p>STEP 4 (Line 3):</p> <p>3.* <u>Site:</u> A. <input type="checkbox"/> Crystal River Unit 3 B. <input type="checkbox"/> St. Lucie Unit 1 C. <input type="checkbox"/> St. Lucie Unit 2 D. <input type="checkbox"/> Turkey Point Unit 3 E. <input type="checkbox"/> Turkey Point Unit 4</p> <p>STANDARD: C, St. Lucie Unit 1 EXAMINER'S CUE: NONE</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
<p>STEP 5 (Line 4):</p> <p>4.* <u>Emergency Classification:</u></p> <p>A. <input type="checkbox"/> Notification of Unusual Event B. <input type="checkbox"/> Alert C. <input type="checkbox"/> Site Area Emergency D. <input type="checkbox"/> General Emergency</p> <p>STANDARD: B, Alert EXAMINER'S CUE: NONE</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>

<p>STEP 6 (Line 5):</p> <p>5.* A. <input type="checkbox"/> <u>Emergency Declaration</u>: B. <input type="checkbox"/> <u>Emergency Termination</u>:</p> <p>Date: ___ / ___ / ___ Time: _____</p> <p>STANDARD: A, Emergency Declaration time and date.</p> <p>EXAMINER'S CUE: NONE EXAMINERS NOTE: This is the time emergency declaration is made. (Step 11 of this JPM)</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>____ SAT</p> <p>____ UNSAT</p>
<p>STEP 7 (Line 6):</p> <p>6.* <u>Reason for Emergency Declaration</u>:</p> <p>A. <input type="checkbox"/> EAL Number _____ OR B. <input type="checkbox"/> Description:</p> <hr/> <hr/> <p>STANDARD: A. EAL Number HA1</p> <p>EXAMINER'S CUE: NONE</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>____ SAT</p> <p>____ UNSAT</p>

<p><u>STEP 8 (Line 7):</u></p> <p>7. <u>Additional Information or Update:</u> A. <input type="checkbox"/> None OR B. <input type="checkbox"/> Description:</p> <hr/> <hr/> <p><u>STANDARD:</u> A. None</p> <p>EXAMINER'S CUE: NONE</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
<p><u>STEP 9 (Line 8):</u></p> <p>8.* <u>Weather Data:</u></p> <p>A. Wind direction from _____ degrees B. Downwind Sectors Affected: _____</p> <p><u>STANDARD:</u> DETERMINES sectors affected MNP (step 8G, Page 45 of EPIP-08)</p> <p>EXAMINER'S CUE: Wind Direction from 94° (454 – 360)</p> <p>EXAMINERS NOTE: Applicant should determine sectors affected MNP (step 8G, Page 45 of EPIP-08)</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>

<p><u>STEP 10 (Line 9):</u></p> <p>9.* Release Status: A. <input type="checkbox"/> None (Go to Item 11) B. <input type="checkbox"/> In progress C. <input type="checkbox"/> Has occurred, but stopped (Go to Item 11)</p> <p><u>STANDARD:</u> NONE (Go to item 11)</p> <p>EXAMINER'S CUE: NONE</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
<p><u>STEP 11 (Line 11):</u></p> <p>11.* UTILITY PROTECTIVE ACTION RECOMMENDATIONS FOR THE PUBLIC:</p> <p>A. <input type="checkbox"/> No utility recommended actions at this time.</p> <p><i>If form is completed in the Control Room, go to Item 15</i></p> <p><u>STANDARD:</u> A. No utility protective action recommendations for the public. Goes to item 15</p> <p>EXAMINER'S CUE: NONE</p> <p>COMMENTS:</p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>

<p>STEP 12 (Line 15): Emergency Coordinator (EC) approval.</p> <p>15.(Do Not Read) EC or RM Approval Signature: _____ Date: ____ / ____ / ____ Time: _____</p> <p>STANDARD: Documents approval including date and time.</p> <p>EXAMINER'S CUE: NONE</p> <p>COMMENTS: SNF should be completed within 15 minutes of the declaration of the emergency. TIME CRITICAL.</p> <p style="text-align: center;">END OF TASK</p>	<p>CRITICAL STEP</p> <p>_____ SAT</p> <p>_____ UNSAT</p>
--	---

STOP TIME _____

**CANDIDATE COPY
(TO BE RETURNED TO THE EXAMINER UPON COMPLETION OF ANSWER)**

Directions to the candidate for Administrative JPMS:

I will explain the initial conditions and state the task to be performed. You will be allowed to use any reference needed to complete the task. Ensure you indicate to me when you finish your assigned task by returning the material needed for the task that I provided to you.

Initial Conditions

Both Units are at 100% power.

A tornado warning has been issued for St. Lucie County. Multiple funnel clouds have been sighted near PSL. All site personnel have been told to seek shelter.

You are the Shift Manager. You are located in the Unit 1 Control Room. A load noise is heard outside of the Control Room door.

At time now, all off-site power is lost. Unit 1 trips. Both EDGs start and load on to their respective safety busses. Annunciator G-47, CST Level Low-Low Alarm comes in immediately.

At time now + 3 minutes 30 seconds, Annunciators G-36, 37, and 38 (1A (1B, 1C) AFW Pump Suction Pressure Low) alarm.

Initiating Cue

You are the SM, located in Unit 1.

Unit 2 reports that it was not affected.

You are to:

- Classify the event.
- Complete the State of Florida Notification Form

NOTE: Portions of this JPM are time critical