

Facility: SALEM 1&2

Job Performance Measure No.: NRC H-12

Task Title: Operate the Chilled Water System (Identify and Isolate Non-Essential Heat Loads)

Task Number: 0980020101

K/A Reference: 2.1.25 Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data. (2.8, 3.1)

Method of testing:Simulated Performance: Actual Performance: _____Classroom: Simulator: _____ Plant: _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. Salem Units 1 & 2 are operating normally at 100% power, except that 21 and 22 Chiller Units have been declared inoperable.
2. Technical Specification LCO 3.7.10 Action b.1. is being implemented to remove appropriate non-essential heat loads from the chilled water system.
3. Inlet Water Temperature Readings from SC.OP-DL.ZZ-0008(Q), Circulating / Service Water Log:
2TL3756 = 83.9°F
2TL3757 = 84.6°F

Task Standard:

Identify non-essential heat loads to be removed from service in order to comply with TS 3.7.10 Action b.1.

Evaluation Criteria:

1. All critical steps completed.
2. All sequential steps completed in order.
3. All time-critical steps completed within allotted time.

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4. **JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

None

General References:

1. **S2.OP.SO.CH-0001(Q), Chilled Water System**
2. **TS 3.7.10, Chill Water System – Auxiliary Building Subsystem**

Applicability:

EO _____

RO √

SRO √

Initiating Cue:

You are directed to specify which non-essential components to remove from service in order to meet the requirements of TS 3.7.10 Action b.1.

Time Critical Task:

No

Validation Time:

15 minutes

Simulator Setup:

N/A

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
	1	Operator obtains TS 3.7.10, Chilled Water System – Auxiliary Building Subsystem and S2.OP-SO.CH-0001(Q), Chilled Water System Operation	CUE: Provide the applicant with copies of: TS 3.7.10 S2.OP-SO.CH-0001(Q)		
	2	Record inlet water temperature and number of chillers out of service	Enters temperatures from cue sheet onto Attachment 2 form. Lists 2 chillers out of service.		
*	3	RECORD the TOTAL HEAT LOAD ISOLATION from Table A.	Enters 1322.4 kBTU/hr onto Attachment A form.		

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
	4	RECORD the value from the HEAT LOAD column into the ISOLATION column for the components selected for isolation.	Records values from HEAT LOAD into ISOLATION columns in Table B.		
*	5	ADD the values recorded in the ISOLATION column AND RECORD the TOTAL ISOLATION value in Table B	<p>Adds values in ISOLATION column.</p> <p>Total must be equal to or greater than 1322.4 kBTU/hr.</p> <p><u>Heat Loads of Non-Essential Components in kBTU/hr:</u> Pen Area Clg Units – 485.7 Emer Cont Air Comp – 334.0 Sec Lab Coolers – 192.1 Pri Lab Coolers – 165.9 Count Rm Coolers – 73.0 PASS Coolers – 38.5 CREACS Inop (Maint Mode) – 406.5</p>		

VERIFICATION OF COMPLETION

Job Performance Measure Number: NRC H-12 (Admin)

Examinee: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

Examinee Response: _____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

EXAMINEE'S CUE SHEET**INITIAL CONDITIONS:**

1. Salem Units 1 & 2 are operating normally at 100% power, except that 21 and 22 Chiller Units have been declared inoperable.
2. Technical Specification LCO 3.7.10 Action b.1. is being implemented to remove appropriate non-essential heat loads from the chilled water system.
3. Inlet Water Temperature Readings from SC.OP-DL.ZZ-0008(Q),
Circulating / Service Water Log:
2TL3756 = 83.9°F
2TL3757 = 84.6°F

INITIATING CUE:

You are directed to specify which non-essential components to remove from service in order to meet the requirements of TS 3.7.10 Action b.1.

Facility: SALEM 1&2

Job Performance Measure No.: NRC H-13

Task Title: Determine Radiological Conditions For Personnel Exposure

Task Number: N/A

K/A Reference: 2.3.10 Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure. (2.9, 3.3)

Method of testing:Simulated Performance: √ Actual Performance: _____Classroom: √ Simulator: _____ Plant: _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

- 1. The Unit is in MODE 6 with Shutdown Cooling in service.**
- 2. A void has developed in the suction line for 21 RHR Pump. The Control Room Supervisor has directed you to go to the 21 RHR Pump Room to operate 21RH55, RHR PUMP SEAL VENT.**

Task Standard:

Determine the area inside the pump room having the lowest dose rate.

Evaluation Criteria:

- 1. All critical steps completed.**
- 2. All sequential steps completed in order.**
- 3. All time-critical steps completed within allotted time.**
- 4. JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:

None

General References:

1. NC.NA-AP.ZZ-0024(Q), Radiation Protection Program
2. S2.OP-SO.RC-0009(Q), Gravity Fill of the RCS and RHR System

Applicability:

EO _____

RO √

SRO √

Initiating Cue:

While waiting for direction from the CRS to operate the valve, (CRS will communicate via a cell phone) where will you stand to minimize dose and why?

Time Critical Task:

No

Validation Time:

15 minutes

Simulator Setup:

N/A

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
*	1	Obtain survey map	<p>Indicates obtaining survey map for 21 RHR Pump Room.</p> <p>CUE: Ask applicant how they would determine the low does area if requested to operate 21RH55.</p> <p>NOTE: Provide the attached survey map after applicant states that he/she would refer to survey map posted outside room or to survey map in Rad Protection office.</p>		

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
*	2	Determine low dose area.	<p>Applicant determines the area on the motor end of the pump has the lowest dose rate (2 mR/hr).</p> <p>NOTE: If necessary, inform applicant that the CRS will communicate via a cell phone and provide direction to operate the vent valve.</p> <p>TERMINATING CUE: Candidate determines the low dose area.</p>		

VERIFICATION OF COMPLETION

Job Performance Measure Number: **NRC H-13 (Admin)**

Examinee: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

Examinee Response: _____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

EXAMINEE'S CUE SHEET

INITIAL CONDITIONS:

1. The Unit is in MODE 6 with Shutdown Cooling in service.
2. A void has developed in the suction line for 21 RHR Pump. The Control Room Supervisor has directed you to go to the 21 RHR Pump Room to operate 21RH55, RHR PUMP SEAL VENT

INITIATING CUE:

While waiting for direction from the CRS to operate the valve, (CRS will communicate via a cell phone) where will you stand to minimize dose and why?

Facility: SALEM 1&2

Job Performance Measure No.: NRC H-14

Task Title: Perform RCS Water Inventory Balance

Task Number: N/A

K/A Reference: 2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation. (3.9, 4.0)

Method of testing:Simulated Performance: √ Actual Performance: Classroom: √ Simulator: Plant:

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. Unit 1 and Unit 2 are operating at 100% power.
2. Unit 1 RCS Water Inventory Balance computer calculation is not available.

Task Standard:

Perform an RCS Water Inventory Balance on Unit 1 to satisfy TS 4.4.7.2.1.d surveillance requirement.

Evaluation Criteria:

1. All critical steps completed.
2. All sequential steps completed in order.
3. All time-critical steps completed within allotted time.
4. JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.

Required Materials:

None

General References:

1. **S2.OP-ST.RC-0008(Q), Reactor Coolant System Water Inventory Balance**

Applicability:

EO _____

RO √

SRO √

Initiating Cue:

Perform an RCS Water Inventory Balance on Unit 1 to satisfy TS 4.4.7.2.1.d surveillance requirement.

Time Critical Task:

No

Validation Time:

15 minutes

Simulator Setup:

N/A

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
	1	Obtain surveillance procedure and forms	Obtains forms. NOTE: Provide surveillance procedure, forms and copy of data sheet.		
*	2	Calculate inventory balance from information provided on data sheet.	Calculates correct inventory balance. Identifies leak rate as exceeding acceptance criteria. TERMINATING CUE: Applicant completes inventory balance		

VERIFICATION OF COMPLETION

Job Performance Measure Number: **NRC H-14 (Admin)**

Examinee: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

Examinee Response: _____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

EXAMINEE'S CUE SHEET

INITIAL CONDITIONS:

1. Unit 1 and Unit 2 are operating at 100% power.
2. Unit 1 RCS Water Inventory Balance computer calculation is not available

INITIATING CUE:

Perform an RCS Water Inventory Balance on Unit 1 to satisfy TS 4.4.7.2.1.d surveillance requirement.

Facility: SALEM 1&2

Job Performance Measure No.: NRC H-15

Task Title: Prepare an Equipment Clearance

Task Number: N/A

K/A Reference: 2.2.13 Knowledge of tagging and clearance procedures. (3.6, 3.8)

Method of testing:Simulated Performance: Actual Performance: Classroom: Simulator: Plant:

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. Unit 1 is operating at 35% power.
2. 12 Heater Drain Pump has developed a small leak on the suction line expansion joint.

Task Standard:

Determine the clearance tags required to isolate and remove 12 Heater Drain Pump from service, specifying the correct sequence for hanging the tags.

Evaluation Criteria:

1. All critical steps completed.
2. All sequential steps completed in order.
3. All time-critical steps completed within allotted time.
4. JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.

Required Materials:

None

General References:

1. **S1.OP-SO.TD-0001(Q), Bleed Steam Coil Drain Tank and Heater Drain Pump Operation**
2. **NC.NA-AP.ZZ-0015(Q), Safety Tagging Program**
3. **SH.OP-AP.ZZ-0015(Q), SAP/WCM Tagging Operations**
4. **SH.WM-DG.ZZ-0015, Work Clearance Management Desk Guide**

Applicability:

EO _____

RO √ SRO √ Initiating Cue:

Determine the clearance tags that will be required to isolate 12 Heater Drain Pump and remove it from service and specify the correct sequence for hanging the tags.

Time Critical Task:

No

Validation Time:

15 minutes

Simulator Setup:

N/A

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
	1	Obtain necessary reference documents	Obtains documents. NOTE: Provide access to reference materials as follows. <u>Drawings:</u> - mechanical system - electrical system <u>Procedures</u> - S1.OP-SO.TD-0001(Q), Bleed Steam Coil Drain Tank and Heater Drain Pump Operation - NC.NA-AP.ZZ-0015(Q), Safety Tagging Program - SH.OP-AP.ZZ-0015(Q), SAP/WCM Tagging Operations - SH.WM-DG.ZZ-0015, Work Clearance Management Desk Guide		

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
*	2	Determine needed safety tags.	Identifies necessary tags. Required tags and component position: <ul style="list-style-type: none"> - pump motor handswitch / off - breaker control power fuses / pulled - motor breaker / racked out - discharge valve / closed - suction valve / closed - casing drain / open - casing vent / open 		

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
*	3	Sequence the hanging of the tags.	Identifies sequence for hanging the tags. Required tag sequence: <ol style="list-style-type: none"> 1. pump motor handswitch / off 2. breaker control power fuses / pulled 3. motor breaker / racked out 4. discharge valve / closed 5. suction valve / closed 6. casing drain / open 7. casing vent / open 		

VERIFICATION OF COMPLETION

Job Performance Measure Number: NRC H-15 (Admin)

Examinee: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

Examinee Response: _____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

EXAMINEE'S CUE SHEET**INITIAL CONDITIONS:**

1. Unit 1 is operating at 35% power.
2. 12 Heater Drain Pump has developed a small leak on the suction line expansion joint.

INITIATING CUE:

Determine the clearance tags that will be required to isolate 12 Heater Drain Pump and remove it from service and specify the correct sequence for hanging the tags.

Facility: SALEM 1&2

Job Performance Measure No.: NRC H-16

Task Title: Review RCS Water Inventory Balance

Task Number: N/A

K/A Reference: 2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation. (3.9, 4.0)

Method of testing:Simulated Performance: Actual Performance: Classroom: Simulator: Plant:

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

- 1. Unit 1 and Unit 2 are operating at 100% power.**
- 2. The Unit 1 RCS Water Inventory Balance computer calculation is not available.**
- 3. The scheduled Unit 1 RCS Water Inventory Balance surveillance test was completed manually by the RO and has been submitted to the CRS for review.**

Task Standard:

Review the Unit 1 RCS Water Inventory Balance to ensure it satisfies the TS 4.4.7.2.1.d surveillance requirement.

Evaluation Criteria:

- 1. All critical steps completed.**
- 2. All sequential steps completed in order.**
- 3. All time-critical steps completed within allotted time.**
- 4. JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:**None**General References:

1. **S2.OP-ST.RC-0008(Q), Reactor Coolant System Water Inventory Balance**

Applicability:

EO _____

RO √ SRO √ Initiating Cue:**Review the Unit 1 RCS Water Inventory Balance to ensure it satisfies the TS 4.4.7.2.1.d surveillance requirement.**Time Critical Task:**No**Validation Time:**15 minutes**Simulator Setup:**N/A**

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
	1	Review surveillance test documentation.	Reviews documentation. NOTE: Provide surveillance procedure and forms.		
*	2	Identifies deficiencies in documentation	Applicant identifies following deficiencies: <ul style="list-style-type: none"> - data taken over less than 3 hours without justification - pwr level change >5% from initial to final readings - correct RCS leakrate is 2.04 gpm TERMINATING CUE: Applicant completes review and has recorded noted discrepancies.		

VERIFICATION OF COMPLETION

Job Performance Measure Number: **NRC H-16 (Admin)**

Examinee: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

Examinee Response: _____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

EXAMINEE'S CUE SHEET**INITIAL CONDITIONS:**

1. Unit 1 and Unit 2 are operating at 100% power.
2. The Unit 1 RCS Water Inventory Balance computer calculation is not available.
3. The scheduled Unit 1 RCS Water Inventory Balance surveillance test was completed manually by the RO and has been submitted to the CRS for review.

INITIATING CUE:

Review the Unit 1 RCS Water Inventory Balance to ensure it satisfies the TS 4.4.7.2.1.d surveillance requirement.

Facility: SALEM 1&2

Job Performance Measure No.: NRC H-17

Task Title: Review an Equipment Clearance

Task Number: N/A

K/A Reference: 2.2.13 Knowledge of tagging and clearance procedures. (3.6, 3.8)

Method of testing:Simulated Performance: Actual Performance: _____Classroom: Simulator: _____ Plant: _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

1. Unit 1 is operating at 35% power.
2. 12 Heater Drain Pump has developed a small leak on the suction line expansion joint.

Task Standard:

Review the clearance boundary and tagging sequence required to isolate and remove 12 Heater Drain Pump from service, identifying errors.

Evaluation Criteria:

1. All critical steps completed.
2. All sequential steps completed in order.
3. All time-critical steps completed within allotted time.
4. JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.

Required Materials:

None

General References:

1. **S1.OP-SO.TD-0001(Q), Bleed Steam Coil Drain Tank and Heater Drain Pump Operation**
2. **NC.NA-AP.ZZ-0015(Q), Safety Tagging Program**
3. **SH.OP-AP.ZZ-0015(Q), SAP/WCM Tagging Operations**
4. **SH.WM-DG.ZZ-0015, Work Clearance Management Desk Guide**

Applicability:

EO _____

RO √ SRO √ Initiating Cue:

Review the clearance boundary and the tagging sequence provided for isolation and removal of 12 Heater Drain Pump from service.

Time Critical Task:**No**Validation Time:**15 minutes**Simulator Setup:**N/A**

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
	1	Obtain necessary reference documents	Obtains documents. NOTE: Provide access to reference materials as follows. <u>Drawings:</u> - mechanical system - electrical system <u>Procedures</u> - S1.OP-SO.TD-0001(Q), Bleed Steam Coil Drain Tank and Heater Drain Pump Operation - NC.NA-AP.ZZ-0015(Q), Safety Tagging Program - SH.OP-AP.ZZ-0015(Q), SAP/WCM Tagging Operations - SH.WM-DG.ZZ-0015, Work Clearance Management Desk Guide		

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
*	2	Determine needed safety tags.	Identifies necessary tags. Required tags and component position: <ul style="list-style-type: none"> - pump motor handswitch / off - breaker control power fuses / pulled - motor breaker / racked out - discharge valve / closed - suction valve / closed - casing drain / open - casing vent / open Boundary Errors: <ul style="list-style-type: none"> - XXXX - XXXX - XXXX 		

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
*	3	Sequence the hanging of the tags.	<p>Identifies sequence for hanging the tags.</p> <p>Required tag sequence:</p> <ol style="list-style-type: none"> 1. pump motor handswitch / off 2. breaker control power fuses / pulled 3. motor breaker / racked out 4. discharge valve / closed 5. suction valve / closed 6. casing drain / open 7. casing vent / open <p>Sequence Errors:</p> <ul style="list-style-type: none"> - xxxx - xxxx - xxxx 		

VERIFICATION OF COMPLETION

Job Performance Measure Number: NRC H-17 (Admin)

Examinee: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

Examinee Response: _____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

EXAMINEE'S CUE SHEET**INITIAL CONDITIONS:**

1. Unit 1 is operating at 35% power.
2. 12 Heater Drain Pump has developed a small leak on the suction line expansion joint.

INITIATING CUE:

Review the clearance boundary and the tagging sequence provided for isolation and removal of 12 Heater Drain Pump from service.

Facility: SALEM 1&2

Job Performance Measure No.: NRC H-18

Task Title: Classify an Event

Task Number: N/A

K/A Reference: 2.4.41 Knowledge of the emergency action level thresholds and classifications. (2.3, 4.1)

Method of testing:Simulated Performance: Actual Performance: Classroom: Simulator: Plant:

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:**Conditions as specified in Scenario Guide.**Task Standard:**Classify the event IAW with the Event Classification Guide**Evaluation Criteria:

- 1. All critical steps completed.**
- 2. All sequential steps completed in order.**
- 3. All time-critical steps completed within allotted time.**
- 4. JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.**

Required Materials:**None**General References:

- 1. Event Classification Guide**

Applicability:

EO _____

RO √ SRO √ Initiating Cue:**Classify the event IAW with the Event Classification Guide**Time Critical Task:**No**Validation Time:**7 minutes**Simulator Setup:**N/A**

# *	STEP NO.	STEP (* = Critical Step) (# = Sequential Step)	STANDARD	EVAL S / U	COMMENTS (Req'd for UNSAT Evaluation)
*	1	Classify the Event	Uses control board indications, informal log and knowledge of scenario progression to evaluate event against Event Classification Guide.		

VERIFICATION OF COMPLETION

Job Performance Measure Number: **NRC H-18 (Admin)**

Examinee: _____

NRC Examiner: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Follow up Question: _____

Examinee Response: _____

Result: SAT _____ UNSAT _____

Examiner's Signature and Date: _____

EXAMINEE'S CUE SHEET

INITIAL CONDITIONS:

Conditions as specified in Scenario Guide.

INITIATING CUE:

Classify the event IAW with the Event Classification Guide.