

JOB PERFORMANCE MEASURES

CRO-033B

TITLE: Perform The Recovery Actions In Response Of The Rod Control System For A Misaligned Rod

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE ___ DISCUSS

EVALUATION LOCATION: X SIMULATOR X CONTROL ROOM ___ PLANT

PROJECTED TIME: 15 MIN SIMULATOR IC NUMBER: JPM IC-2
(IF APPLICABLE)

ALTERNATE PATH ___ TIME CRITICAL ___ PRA ___

DIRECTIONS TO TRAINEE:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If, in the judgement of the evaluator, the trainee is significantly deficient in knowledge, (based on the questions being asked), a JPM/QR Comment Sheet should be submitted to the program administrator summarizing the weaknesses.

STANDARDS

To successfully complete this JPM, you must satisfy each of the following criteria:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.

JPM Approved: W. D. OLDFIELD 7/30/98
Supervisor - Operations Training

JOB PERFORMANCE MEASURES

CRO-033B-Modified

TITLE: Respond to a Dropped Rod During Recovery of a Misaligned Rod

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT ___ LRP ___

ACCEPTABLE EVALUATION METHOD: PERFORM ___ SIMULATE ___ DISCUSS

EVALUATION LOCATION: SIMULATOR ___ CONTROL ROOM ___ PLANT

PROJECTED TIME: 15 MIN SIMULATOR IC NUMBER: JPM IC-2
(IF APPLICABLE)

ALTERNATE PATH TIME CRITICAL ___ PRA ___

DIRECTIONS TO TRAINEE:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If, in the judgement of the evaluator, the trainee is significantly deficient in knowledge, (based on the questions being asked), a JPM/QR Comment Sheet should be submitted to the program administrator summarizing the weaknesses.

STANDARDS

To successfully complete this JPM, you must satisfy each of the following criteria:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.

JPM Approved: _____
Supervisor - Operations Training

CONDITIONS

When I tell you to begin, you are to PERFORM THE RECOVERY ACTIONS IN RESPONSE OF THE ROD CONTROL SYSTEM FOR A MISALIGNED ROD. The conditions under which this task is to be performed are:

- a. Plant is in Mode 1, ramping from 100% to 15%
- b. The ramp has been stopped at $\approx 79\%$ pwr
- c. DRPI indication for rod H-2 indicates 216 steps, DRPI indication for all other Bank D rods indicate 198 steps
- d. Rod H-2 lift coil fuse was blown and has been replaced
- e. All actions of AOP-19.0 for recovery of the misaligned rod have been completed
- f. Directed by Shift Supervisor to perform Attachment 1 of AOP-19.0

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
-----------	------------	----------------------

NOTE: THE FOLLOWING ELEMENT MAY BE SATISFIED BY EXAMINEE LOCATING THE REACTOR OPERATOR'S LOGBOOK AND SIMULATING RECORDING CBD1 STEP COUNTER POSITION.

START TIME

- | | | | |
|-----|--|--|-------|
| 1. | Record the step counter position for CBD1 in the reactor operator's logbook | Step counter position for rod group CBD1 checked. (CUE: CBD1 step counter reads 202 steps, position value is recorded.) | S / U |
| *2. | Open the lift coil disconnect switches of all but the affected rod in control bank D | Lifts disconnect switch for rods B-8, H-14, P-8, F-6, F-10, K-10, K-6. (CUE: All disconnect switches operated are in up position.) | S / U |
| *3. | Adjust misaligned rod to agree with associated group DRPI indication | In-Hold-Out switch to the IN position. | S / U |

NOTE: Rod H-2 drops to zero when the In-Hold-Out switch is moved out of the Hold position.

- | | | | |
|-----|-----------------------|---|-------|
| *4. | Diagnose dropped rod. | Rod bottom light, first out annunciator, and negative rate bistables noted. | S / U |
|-----|-----------------------|---|-------|

EVALUATION CHECKLIST

ELEMENTS:	STANDARDS:	RESULTS: (CIRCLE)
*5. Trip the reactor.	Trip switch placed in trip.	S / U
6. Check reactor tripped.	<ul style="list-style-type: none">• Reactor trip and bypass breakers verified open• Nuclear power – falling• Rod bottom lights lit	S / U
7. Check turbine tripped.	TSLB2 14-1, 2, 3, and 4 lit	S / U
8. Verify at least one train of 4160 V ESF busses energized.	A and B train power available lights lit.	S / U
9. Check SI status.	Determine that SI is not required.	S / U

STOP TIME

Terminate when it is determined that SI is not required.

* **CRITICAL ELEMENTS:** 2, 3, 4, and 5

GENERAL REFERENCES

1. FNP-1-AOP-19.0
2. FNP-1-EEP-0
2. Technical Specifications
3. K/As: 001A2.03 RO-3.5SRO-4.2
 001A3.05 RO-3.5SRO-3.5
 001A4.06 RO-2.9SRO-3.2
 001A4.14 RO-3.0SRO-3.4

GENERAL TOOLS AND EQUIPMENT

None

COMMENTS

CONDITIONS

When I tell you to begin, you are to RECOVER A MISALIGNED CONTROL ROD. The conditions under which this task is to be performed are:

- a. Plant is in Mode 1, ramping from 100% to 15%
- b. The ramp has been stopped at \approx 79% pwr
- c. DRPI indication for rod H-2 indicates 216 steps, DRPI indication for all other Bank D rods indicate 198 steps
- d. Rod H-2 lift coil fuse was blown and has been replaced
- e. All actions of AOP-19.0 for recovery of the misaligned rod have been completed
- f. Directed by Shift Supervisor to perform Attachment 1 of AOP-19.0

JOB PERFORMANCE MEASURES

CRO-035

TITLE: Perform RCS Water Inventory Balance

PROGRAM APPLICABLE: SOT SORP OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM X SIMULATE DISCUSS

EVALUATION LOCATION: X SIMULATOR X CONTROL ROOM PLANT

PROJECTED TIME: 20 MIN SIMULATOR IC NUMBER: N/A
(IF APPLICABLE)

ALTERNATE PATH TIME CRITICAL PRA

DIRECTIONS TO TRAINEE:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If, in the judgement of the evaluator, the trainee is significantly deficient in knowledge, (based on the questions being asked), a JPM/QR Comment Sheet should be submitted to the program administrator summarizing the weaknesses.

STANDARDS

To successfully complete this JPM, you must satisfy each of the following criteria:

- a. The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.
- b. All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.

JPM Approved: *Joel L. Deavers* 5/21/98

Supervisor - Operations Training

CONDITIONS

When I tell you to begin, you are to PERFORM RCS WATER INVENTORY BALANCE. The conditions under which this task is to be performed are:

- a. The plant is in Mode 1 at 100% power
- b. All initial conditions have been met
- c. RCDT is operable
- d. I&C support is not required for PRT level measurement
- e. The Shift Supervisor directs you to perform an RCS leakage test for Unit 1 per STP-9.0

EVALUATION CHECKLIST

<u>ELEMENTS:</u>	<u>STANDARDS:</u>	<u>RESULTS: (CIRCLE)</u>
<u>START TIME</u>		
<u>1. Align the RCDT</u>		
<u>a. Check RCDT level in the normal operating band</u>	<u>Direct System Operator to check RCDT level. (CUE: RCDT level in normal range.)</u>	<u>S / U</u>
<u>b. Check RCDT pump disch line ISO Q1G21HV7136 closed</u>	<u>HV-7136 closed on MCB. (CUE: Green light illuminated on HV-7136.)</u>	<u>S / U</u>
<u>c. Check RCDT LCV Q1G21LCV1003 closed</u>	<u>LCV-1003 closed on MCB. (CUE: Green light illuminated on LCV-1003.)</u>	<u>S / U</u>
<u>2. Read and record initial readings. (CUE: Provide the following readings to the examinee as the indicators are referred to on the MCB.)</u>	<u>Readings recorded on Data Sheet</u>	<u>S / U</u>
<u>TI-453 = 653°F</u>	<u>LI-459 = 51%</u>	
<u>PI-455 = 2235 psig</u>	<u>LI-460 = 53%</u>	
<u>PI-456 = 2240 psig</u>	<u>LI-461 = 52%</u>	
<u>PI-457 = 2230 psig</u>	<u>LI-115 = 40%</u>	
<u>TI-412D = 576°F</u>	<u>LI-1003 = 30%</u>	
<u>TI-422D = 575°F</u>	<u>LI-470 = 70%</u>	
<u>TI-432D = 576°F</u>	<u>FIS-168 = 065663</u>	

EVALUATION CHECKLIST

<u>ELEMENTS:</u>	<u>STANDARDS:</u>	<u>RESULTS:</u> <u>(CIRCLE)</u>
<u>NOTE: THE 1 HOUR MAY BE WAIVED AS LONG AS THE EXAMINEE STATES AT LEAST 1 HOUR OF ELAPSED TIME IS PREFERRED.</u>		
<u>3. Verify that RCS temperature and pressure and pressurizer temperature are same as recorded for initial reading</u>	<u>RCS temperature and pressure and pressurizer temperature verified to be same as initially recorded.</u> <u>(CUE: Provide the following readings to the examinee as the indicators are referred to on the MCB.)</u>	<u>S \ U</u>
	<u>TI-453 = 653°F LI-459 = 51%</u> <u>PI-455 = 2235 psig LI-460 = 53%</u> <u>PI-456 = 2240 psig LI-461 = 52%</u> <u>PI-457 = 2230 psig LI-115 = 32%</u> <u>TI-412D = 576°F LI-1003 = 30%</u> <u>TI-422D = 575°F LI-470 = 71%</u> <u>TI-432D = 576°F FIS-168 = 065663</u>	
<u>4. Read and record final readings</u>	<u>Readings recorded on Data Sheet after 1 hour has elapsed.</u>	<u>S / U</u>
<u>*5. Calculate identified and unidentified leakages</u>	<u>Identified = 1.72 ± 0.1 gpm</u> <u>Unidentified = 0.15 ± 0.1 gpm</u>	<u>S / U</u>
<u>NOTE: THE ABOVE STANDARDS ARE BASED ON TABLES FOUND IN THE TANK CURVE BOOK. IF THE ACTUAL CURVES ARE USED THEN THE FOLLOWING VALUES WILL BE THE STANDARD: TOTAL LEAKAGE = 1.87 gpm; IDENTIFIED LEAKAGE = 1.67 ± 0.4 gpm; UNIDENTIFIED LEAKAGE = 0.2 ± 0.4 gpm</u>		
<u>*6. Assess calculated leakage values are within acceptance criteria limits</u>	<u>Acceptance criteria limits are:</u> <u>Unidentified leakage < 1 gpm;</u> <u>Identified leakage < 10 gpm</u>	<u>S / U</u>
<u>7. Return the RCDT system to normal per SOP-50.0, ("A" Man directed by Operator)</u>	<u>"Radman" directed to return the RCDT system to normal. (CUE: "A" Man acknowledges instruction, reports RCDT aligned per SOP-50.0.)</u>	<u>S / U</u>
<u>8. Check unidentified leakage less than 0.097 gpm per Data Sheet 1</u>	<u>Unidentified leakage determined to be greater than 0.097 gpm</u>	<u>S / U</u>

EVALUATION CHECKLIST

<u>ELEMENTS:</u>	<u>STANDARDS:</u>	<u>RESULTS: (CIRCLE)</u>
9. <u>Check primary-to-secondary leakage within limits per STP-748</u>	<u>Chemistry contacted. (CUE: SG A < 1 gpd, SG B < 1 gpd, SG C < 1 gpd.)</u>	<u>S / U</u>
*10. <u>Verify the primary-to-secondary leakage rate is acceptable</u>	<u>Acceptance criteria limits are: < 140 gpd through any one SG < 420 gpd total through all SGs</u>	<u>S / U</u>

STOP TIME

Terminate when acceptance criteria for primary-to-secondary leakage rate is determined to be met.

*** CRITICAL ELEMENTS: 7, 8, 12**

GENERAL REFERENCES

1. STP-9.0
2. K/As: 000009 EA2.33 RO-3.3SRO-3.8

GENERAL TOOLS AND EQUIPMENT

1. Calculator
2. Uncontrolled copy of STP-9.0
3. Tank Curve Book

COMMENTS

CONDITIONS

When I tell you to begin, you are to PERFORM RCS WATER INVENTORY BALANCE. The conditions under which this task is to be performed are:

- a. The plant is in Mode 1 at 100% power
- b. All initial conditions have been met
- c. RCDT is operable
- d. I&C support is not required for PRT level measurement
- e. The Shift Supervisor directs you to perform an RCS leakage test for Unit 1 per STP-9.0

JOB PERFORMANCE MEASURES**CRO-035**

TITLE: Perform RCS Water Inventory Balance

PROGRAM APPLICABLE: SOT ___ SORP ___ OLT X LRP X

ACCEPTABLE EVALUATION METHOD: X PERFORM ___ X SIMULATE ___ DISCUSS

EVALUATION LOCATION: X SIMULATOR ___ X CONTROL ROOM ___ PLANT

PROJECTED TIME: 20 MIN ___ SIMULATOR IC NUMBER: N/A ___
 (IF APPLICABLE)

ALTERNATE PATH ___ TIME CRITICAL ___ PRA ___

DIRECTIONS TO TRAINEE:

1. Access to tools, equipment, and references normally used to perform this task are allowed.
2. During initial training, it is encouraged that questions be asked as part of this OJT process to assess the extent of trainee knowledge related to this task.
3. If, in the judgement of the evaluator, the trainee is significantly deficient in knowledge, (based on the questions being asked), a JPM/QR Comment Sheet should be submitted to the program administrator summarizing the weaknesses.

STANDARDS

To successfully complete this JPM, you must satisfy each of the following criteria:

- a. ~~The task must be performed using the appropriate plant procedures, Technical Specifications, or other references.~~
- b. ~~All critical elements must be performed, simulated, or discussed without error, prompting or unnecessary queuing.~~

~~JPM Approved: Joel L. Deavers 5/21/98
Supervisor - Operations Training~~

CONDITIONS

When I tell you to begin, you are to ~~PERFORM RCS WATER INVENTORY BALANCE~~. The conditions under which this task is to be performed are:

- ~~_____ a. _____ The plant is in Mode 1 at 100% power~~
- ~~_____ b. _____ All initial conditions have been met except for getting the calibration due date for LI 115 VCT level~~
- ~~_____ c. _____ RCDT is operable~~
- ~~_____ d. _____ I&C support is not required for PRT level measurement~~
- ~~_____ e. _____ The Shift Supervisor directs you to perform an RCS leakage test for Unit 1 per STP 9.0~~

EVALUATION CHECKLIST**ELEMENTS:****STANDARDS:****RESULTS:**