

Facility: **BVPS Unit 1** Task No.: 0021-005-06-013

Task Title: Perform a Quadrant Power Tilt Ratio Calculation JPM No.: 2007 NRC RO A1.1

K/A Reference: 015A4.02 3.5/3.7 015A4.02 3.9/3.9

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: X Actual Performance: _____

Classroom X 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: The plant is in Mode 1 at 100% power. The plant computer is **NOT** available.

Task Standard: The QPTR calculation is completed, including current readings within the specified tolerance, and compared to Technical Specification limits, as specified in the Acceptance Criteria.

Required Materials: Calculator

General References: 1OST-2.4A, Quadrant Power Tilt Ratio Manual Calculation, Rev. 3

Handouts: 1OST-2.4A, Quadrant Power Tilt Ratio Manual Calculation, Rev. 3
With Normalization Factors and Uncorrected current supplied.

Initiating Cue: The Shift Manager directs you to perform a QPTR manual calculation using 1OST-2.4A, Quadrant Power Tilt Ratio Manual Calculation and report the results. No uncertainties exist, and a computer tilt map is not required. Normalization factors and uncorrected currents have already been obtained. You are to begin at Step VII.B.2 and complete the remainder of the JPM.

Time Critical Task: NO

Validation Time: 10 minutes

PERFORMANCE INFORMATION

(Denote Critical Steps with a check mark)

START TIME: _____

√ **Performance Step: 1**
(Step VII.B.2)

Multiply each of the detector current readings by its associated normalization factor **AND** Record the result in the "Current (Cor.)" column of Data Sheet 1.

Standard:

Candidate determines corrected current by multiplying each detectors Current (Uncor.) value by the associated normalization factor and records the result in the appropriate Data Sheet 1 Current (Cor.) column.

Comment:

Compare candidate's data to the ANSWER Key Data.

√ **Performance Step: 2**
(Step VII.B.3.a, b & c)

Perform the following for the Upper Detectors on Data Sheet 1:

- Add the values in the "Current (Cor.)" column **AND** Record the result in the space marked "SUM".
- Divide the value in the "SUM" space by 4(3) **AND** Record the result in the space marked "AVG".
- Determine the Tilt Ratio for each of the upper detectors by dividing each value in the "Current (Cor.)" column by the value of "AVG" **AND** Record the results in the "Tilt Ratio" column.

Standard:

Candidate determines upper detector average corrected current and records the results in the Data Sheet 1 Upper Detector Current (Cor.) AVG space.

Standard:

Candidate determines the tilt ratio for each upper detector and records the result in the Data Sheet 1 Upper Detector Tilt Ratio column.

Comment:

Compare candidate's data to the ANSWER Key Data.

PERFORMANCE INFORMATION

- ✓ **Performance Step: 3**
(Step VII.B.4.a, b & c)
- Perform the following for the Lower Detectors on Data Sheet 1:
- Add the values in the "Current (Cor.)" column **AND** Record the result in the space marked "SUM".
 - Divide the value in the "SUM" space by 4(3) **AND** Record the result in the space marked "AVG".
 - Determine the Tilt Ratio for each of the lower detectors by dividing each value in the "Current (Cor.)" column by the value of "AVG" **AND** Record the results in the "Tilt Ratio" column.
- Standard:** Candidate determines lower detector average corrected current and records the results in the Data Sheet 1 Lower Detector Current (Cor.) AVG space.
- Standard:** Candidate determines the tilt ratio for each lower detector and records the result in the Data Sheet 1 Lower Detector Tilt Ratio column.
- Comment:** Compare candidate's data to the **ANSWER Key Data.**
-
- Performance Step: 4**
(Step VII.B.5)
- If uncertainty exists with the calculated tilt values, Request the Tilt Review Map from the IPC **AND** Compare the map with the results of this OST.
- Standard:** Candidate evaluate if an uncertainty exists with the calculated tilt values in order to request, and compare to, a computer tilt map. Based on initial conditions, determines this step is N/A.
- Comment:**

PERFORMANCE INFORMATION

- √ **Performance Step: 5** Consult the Acceptance Criteria for acceptable performance.
(Step VII.C.1 & III.A) Quadrant Power Tilt Ratio (QPTR) does not exceed 1.02 (Data Sheet 1)(T.S. 3.2.4.1).

Standard: Candidate compares test data with Acceptance Criteria to determine if QPTR exceeds 1.02.

NOTE: After Candidate determines tilt is either within OR out of specification, compare Candidate's data sheet to the ANSWER KEY to determine satisfactory performance of this JPM.

Comment: Compare candidate's data to the ANSWER Key Data.

Terminating Cue: When the Candidate completes the QPTR calculation, the evaluation for this JPM is complete.

STOP TIME: _____

VERIFICATION OF COMPLETION

JPM No.: 2007 NRC RO A1.1

Examinee's Name:

Examiner's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:Question: _____

_____Response: _____

Result: Satisfactory/Unsatisfactory

Examiner's Signature: _____ Date: _____

ANSWER KEY

DATA SHEET 1
MANUAL QPTR CALCULATION
UPPER DETECTORS

| Current (Uncor.) | Norm Factor | Current (Cor.) | Tilt Ratio |
|------------------|-------------|----------------|------------|
| N41A 148 | 0.0484 | 7.1632 | 0.9907 |
| N42A 148 | 0.0489 | 7.2372 | 1.0010 |
| N43A 139 | 0.0533 | 7.4087 | 1.0247 |
| N44A 165 | 0.0431 | 7.1115 | 0.9836 |
| | | SUM 28.9206 | |
| | | AVG 7.2302 | |

LOWER DETECTORS

| Current (Uncor.) | Norm Factor | Current (Cor.) | Tilt Ratio |
|------------------|-------------|----------------|------------|
| N41B 183 | 0.0401 | 7.3383 | 1.0006 |
| N42B 162 | 0.0452 | 7.3224 | 0.9984 |
| N43B 140 | 0.0520 | 7.2800 | 0.9927 |
| N44B 157 | 0.0471 | 7.3947 | 1.0083 |
| | | SUM 29.3354 | |
| | | AVG 7.3339 | |

Performed By _____ / _____ / _____ (Init/Time/Date)

Verified By _____ / _____ (Init/Date)

ANSWER KEY

INITIAL CONDITIONS: The plant is in Mode 1 at 100% power. The plant computer is **NOT** available.

INITIATING CUE: The Shift Manager directs you to perform a QPTR manual calculation using 1OST-2.4A, Quadrant Power Tilt Ratio Manual Calculation and report the results. No uncertainties exist, and a computer tilt map is not required. Normalization factors and uncorrected currents have already been obtained. You are to begin at Step VII.B.2 and complete the remainder of the JPM.

Facility: **BVPS Unit 1** Task No.: 0021-005-06-013

Task Title: Perform a Quadrant Power Tilt Ratio Calculation JPM No.: 2007 NRC SRO A1.1

K/A Reference: 015A4.02 3.5/3.7 015A4.02 3.9/3.9

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: X Actual Performance: _____

Classroom X 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: The plant is in Mode 1 at 100% power. The plant computer is **NOT** available.

Task Standard: The QPTR calculation is completed, including current readings within the specified tolerance, and compared to Technical Specification limits, as specified in the Acceptance Criteria.

Required Materials: Calculator

General References: 1OST-2.4A, Quadrant Power Tilt Ratio Manual Calculation, Rev. 3

Handouts: 1OST-2.4A, Quadrant Power Tilt Ratio Manual Calculation, Rev. 3
With Normalization Factors and Uncorrected current supplied.

Initiating Cue: The Shift Manager directs you to perform a QPTR manual calculation using 1OST-2.4A, Quadrant Power Tilt Ratio Manual Calculation and report the results. No uncertainties exist, and a computer tilt map is not required. Normalization factors and uncorrected currents have already been obtained. You are to begin at Step VII.B.2 and complete the remainder of the JPM. IF the QPTR calculation results in required Tech Spec actions, list the Tech Spec number and required actions in the comment section of the OST coversheet. IF NO Tech Spec actions are required, list NONE in the comment section of the OST coversheet.

Time Critical Task: NO

Validation Time: 15 minutes

PERFORMANCE INFORMATION

(Denote Critical Steps with a check mark)

START TIME: _____

√ **Performance Step: 1**
(Step VII.B.2)

Multiply each of the detector current readings by its associated normalization factor **AND** Record the result in the "Current (Cor.)" column of Data Sheet 1.

Standard:

Candidate determines corrected current by multiplying each detectors Current (Uncor.) value by the associated normalization factor and records the result in the appropriate Data Sheet 1 Current (Cor.) column.

Comment:

Compare candidate's data to the ANSWER Key Data.

√ **Performance Step: 2**
(Step VII.B.3.a, b & c)

Perform the following for the Upper Detectors on Data Sheet 1:

- Add the values in the "Current (Cor.)" column **AND** Record the result in the space marked "SUM".
- Divide the value in the "SUM" space by 4(3) **AND** Record the result in the space marked "AVG".
- Determine the Tilt Ratio for each of the upper detectors by dividing each value in the "Current (Cor.)" column by the value of "AVG" **AND** Record the results in the "Tilt Ratio" column.

Standard:

Candidate determines upper detector average corrected current and records the results in the Data Sheet 1 Upper Detector Current (Cor.) AVG space.

Standard:

Candidate determines the tilt ratio for each upper detector and records the result in the Data Sheet 1 Upper Detector Tilt Ratio column.

Comment:

Compare candidate's data to the ANSWER Key Data.

PERFORMANCE INFORMATION

- ✓ **Performance Step: 3**
(Step VII.B.4.a, b & c)
- Perform the following for the Lower Detectors on Data Sheet 1:
- Add the values in the "Current (Cor.)" column **AND** Record the result in the space marked "SUM".
 - Divide the value in the "SUM" space by 4(3) **AND** Record the result in the space marked "AVG".
 - Determine the Tilt Ratio for each of the lower detectors by dividing each value in the "Current (Cor.)" column by the value of "AVG" **AND** Record the results in the "Tilt Ratio" column.
- Standard:** Candidate determines lower detector average corrected current and records the results in the Data Sheet 1 Lower Detector Current (Cor.) AVG space.
- Standard:** Candidate determines the tilt ratio for each lower detector and records the result in the Data Sheet 1 Lower Detector Tilt Ratio column.
- Comment:** Compare candidate's data to the **ANSWER Key Data**.
-
- Performance Step: 4**
(Step VII.B.5)
- If uncertainty exists with the calculated tilt values, Request the Tilt Review Map from the IPC **AND** Compare the map with the results of this OST.
- Standard:** Candidate evaluate if an uncertainty exists with the calculated tilt values in order to request, and compare to, a computer tilt map. Based on initial conditions, determines this step is N/A.
- Comment:**

PERFORMANCE INFORMATION

- √ **Performance Step: 5** Consult the Acceptance Criteria for acceptable performance.
(Step VII.C.1 & III.A) Quadrant Power Tilt Ratio (QPTR) does not exceed 1.02 (Data Sheet 1)(T.S. 3.2.4.1).

Standard: Candidate compares test data with Acceptance Criteria to determine if QPTR exceeds 1.02.

NOTE: After Candidate determines tilt is either within OR out of specification, compare Candidate's data sheet to the ANSWER KEY to determine satisfactory performance of this JPM.

Comment: Compare candidate's data to the ANSWER Key Data.

- √ **Performance Step: 6** Lists Tech Spec number and required actions

Standard: Candidate list required Tech Spec actions and Tech Spec number in the comment section of the OST coversheet.

Comment: Compare candidate's data to the ANSWER Key Data on the OST Coversheet.

Terminating Cue: When the Candidate completes the OST coversheet identifying the required Tech spec actions then this JPM is complete.

STOP TIME: _____

VERIFICATION OF COMPLETION

JPM No.: 2007 NRC SRO A1.1

Examinee's Name:

Examiner's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:Question: _____

_____Response: _____

Result: Satisfactory/Unsatisfactory

Examiner's Signature: _____ Date: _____

| Frequency: [CTS] W*, 12 Hours** [ITS] 7 Days*, 12 Hours ** | Surveillance Requirements: [CTS] 4.2.4.a, BVPS-1 Licensing Requirements Manual 3.5.1 [ITS] SR 3.2.4.1, LRS 3.3.5.1 | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------------|----------------|---------------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Required for MODE(s): 1* Performed in MODE(s): 1 | Date / Time Completed: _____ / _____ Total Manhours: _____ | | | | | | | | | | | | | | | | | | | | | | |
| TEST RESULTS: (Completed by Performer) | PERFORMED BY: | | | | | | | | | | | | | | | | | | | | | | |
| (√ or N/A) | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%; text-align: center;"><u>Name (Print)</u></th> <th style="width: 20%; text-align: center;"><u>Initial</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Lead Operator</td> <td style="text-align: center;">LO</td> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> | <u>Name (Print)</u> | <u>Initial</u> | Lead Operator | LO | | | | | | | | | | | | | | | | | | |
| <u>Name (Print)</u> | <u>Initial</u> | | | | | | | | | | | | | | | | | | | | | | |
| Lead Operator | LO | | | | | | | | | | | | | | | | | | | | | | |
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| <input type="checkbox"/> _____ Test Completed SATISFACTORY | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> <u>√</u> Problems Encountered (See Problem Sheet) | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> _____ Unscheduled/partial OST (explain) _____ _____ | | | | | | | | | | | | | | | | | | | | | | | |
| Reviewer Signature/Date | | | | | | | | | | | | | | | | | | | | | | | |
| STA Review _____ SM Approval _____ | | | | | | | | | | | | | | | | | | | | | | | |
| ANSWER KEY | | | | | | | | | | | | | | | | | | | | | | | |
| COMMENTS: (Include Date and Initials) | | | | | | | | | | | | | | | | | | | | | | | |
| This surveillance does NOT meet acceptance criteria. N43 Upper detector QPTR is 1.0247. | | | | | | | | | | | | | | | | | | | | | | | |
| Per Technical Specification 3.2.4, Condition 'A', required to reduce power 3% from RTP for each 1% | | | | | | | | | | | | | | | | | | | | | | | |
| of QPTR > 1.00. Power is currently 100% RTP. Power shall be lowered at least 7.2% (3% X 2.4) | | | | | | | | | | | | | | | | | | | | | | | |
| 2 hours after QPTR determination. | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Comments continued on Problem Sheet | | | | | | | | | | | | | | | | | | | | | | | |

* Above 50% of rated thermal power.

**** Required at least once every 12 hours during steady-state operation when QPTR alarm is inoperable.**

Quadrant Power Tilt Ratio Manual Calculation

ANSWER KEY

DATA SHEET 1
MANUAL QPTR CALCULATION
UPPER DETECTORS

| Current (Uncor.) | Norm Factor | Current (Cor.) | Tilt Ratio |
|------------------|---------------|----------------------|------------|
| N41A 148 | 0.0484 | 7.1632 | 0.9907 |
| N42A 148 | 0.0489 | 7.2372 | 1.0010 |
| N43A 139 | 0.0533 | 7.4087 | 1.0247 |
| N44A 165 | 0.0431 | 7.1115 | 0.9836 |
| | | SUM 28.9206 | |
| | | AVG 7.2302 | |

LOWER DETECTORS

| Current (Uncor.) | Norm Factor | Current (Cor.) | Tilt Ratio |
|------------------|---------------|----------------------|------------|
| N41B 183 | 0.0401 | 7.3383 | 1.0006 |
| N42B 162 | 0.0452 | 7.3224 | 0.9984 |
| N43B 140 | 0.0520 | 7.2800 | 0.9927 |
| N44B 157 | 0.0471 | 7.3947 | 1.0083 |
| | | SUM 29.3354 | |
| | | AVG 7.3339 | |

Performed By _____ / _____ / _____ (Init/Time/Date)

Verified By _____ / _____ (Init/Date)

ANSWER KEY

INITIAL CONDITIONS: The plant is in Mode 1 at 100% power. The plant computer is **NOT** available.

INITIATING CUE: The Shift Manager directs you to perform a QPTR manual calculation using 1OST-2.4A, Quadrant Power Tilt Ratio Manual Calculation and report the results. No uncertainties exist, and a computer tilt map is not required. Normalization factors and uncorrected currents have already been obtained. You are to begin at Step VII.B.2 and complete the remainder of the JPM. IF the QPTR calculation results in required Tech Spec actions, list the Tech Spec number and required actions in the comment section of the OST coversheet. IF NO Tech Spec actions are required, list NONE in the comment section of the OST coversheet.

Facility: BVPS UNIT 1

Task No: 0481-006-03-013

Task Title: Shift Relief and TurnoverJPM No: 2007 NRC RO A1.2

K/A Reference: 2.1.3 (3.0)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: N/A

Date: _____

Method of testing:

Simulated Performance: _____

Actual Performance X

Classroom: _____

Simulator: X

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:

The Unit is operating in Mode 2. You are the oncoming day shift Reactor Operator. You have just completed relief turnover with the offgoing RO with the exception of completing the control board checklist. The IPC is out of service.

Task Standard:

1OST-48.3A, Control Board Checklist, is completed and errors identified. (TV-SI-101-2, TV-DG-109A1 not in REQUIRED position)

Required Materials:

None

General References:

1OST-48.3A, Control Board Checklist, Rev. 11

Initiating Cue:

In accordance with 1OST-48.3A, Control Board Checklist, verify the equipment in section I and II, Train A and B Containment Isolation Valves, by performing a control board walkdown. Report your results.

Time Critical Task:

NO

BVPS-1 2007 NRC RO A1.2

Validation Time:

10 minutes

JOB PERFORMANCE MEASURE

Simulator Setup Information

Setup: Initialize IC-226. Verify the following:

- Ensure TV-SI-101-2 is OPEN and TV-DG-109A1 is CLOSED

PERFORMANCE INFORMATION

(Denote Critical Steps with a check mark)

NOTE: Individual reports are not required for each section of the procedure.
The Candidate may review the entire checklist prior to reporting the results.

Performance Step 1: Complete Initial Conditions section of procedure.

Standard: Candidate initials Step IV.A to begin performance of the OST.

Comments:

✓ **Performance Step 2:** Verify the Containment Isolation Valves (Train 'A' and 'B') are in their required positions per sections I and II of the control board checklist.

Standard: Candidate identifies that TV-SI-101-2 and TV-DG-109A1 are NOT in the REQUIRED position as listed in the Control Board Checklist.

Comments: **Evaluator note: If asked, inform the applicant that the PO will investigate**

✓ **Performance Step 3:** Assign a Deviation Number in the Shift Check Block.
(Step V.2)

Standard: Candidate assigns a Deviation Number to each of the identified deficiencies and records the number in the Shift Check Block.

Comments:

PERFORMANCE INFORMATION

✓ Performance Step:
(Step II.A)

Consult Acceptance Criteria.

Standard:

Candidate refers to Acceptance Criteria and informs Shift Manager of identified deficiencies.

Cue: The Unit Supervisor will review and disposition the deviations.**Comments:**

Terminating Cue:

The evaluation is complete when the Candidate reports the errors in the plant alignment sections of the Control Board Checklist OST.

VERIFICATION OF COMPLETION

JPM No.: 2007 NRC RO A1.2

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator: N/A

Number of attempts:

Time to complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS:

The Unit is operating in Mode 2. You are the oncoming day shift Reactor Operator. You have just completed relief turnover with the offgoing RO with the exception of completing the control board checklist. The IPC is out of service.

INITIATING CUE:

In accordance with 10ST-48.3A, Control Board Checklist, verify the equipment in section I and II, Train A and B Containment Isolation Valves, by performing a control board walkdown. Report your results.

Facility: BVPS- Unit 1 Task No.: 1330-005-03-023
Task Title: Determine availability for call-in JPM No.: 2007 NRC JPM SRO
A1.2
K/A Reference: 2.1.3 (3.4)

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing: **This JPM can be performed in any setting with the required references available.**

Simulated Performance: _____ Actual Performance: X
Classroom X 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: Today is 4/14/07. The daylight RO for 4/15/07 has called in sick. The only available RO replacement has the listed work hour history.

Task Standard: Determine that working hour limits will be exceeded in accordance with NOP-LP-1002. (72 hours in 7 days)

Required Materials: None

General References: NOP-LP-1002, Fitness For Duty Program

Handouts: Working hour history; NOP-LP-1002, Fitness For Duty Program

Initiating Cue: As the Unit Supervisor, determine if the RO replacement is able to work the 8 hour daylight shift on 4/15/2007 without violating the FFD program. Explain why or why not. Document your results on the sheet provided.

Time Critical Task: No

Validation Time: 15 minutes

(Denote Critical Steps with a √)

Start Time: _____.

Performance Step: 1 Evaluate working hours.

Standard: Compares working hours against FFD requirements

Evaluator Cue: • Provide cue sheet (last page of JPM).

Comment:

√ **Performance Step: 2** Determines working hour limit will be exceeded, and documents on the sheet provided.

Standard: Determines that the RO may not be called in.
Determines that the RO will exceed 72 hours in 7 days after working 6 hours on 4/15. (Turnover times are not considered in this determination).

NOTE: Compare the documented results to this standard to determine "satisfactory" completion of the JPM.

Comment:

Terminating Cue: The evaluation on this JPM is complete when the applicant determines whether the RO may be called in.

Job Performance Measure No.: BVPS-1 2007 NRC SRO A1.2

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS:

Today is 4/14/07. The daylight RO for 4/15/07 has called in sick. The only available RO replacement has the listed work hour history.

INITIATING CUE:

As the Unit Supervisor, determine if the RO replacement is able to work the 8 hour daylight shift on 4/15/2007 without violating the FFD program. Explain why or why not. Document your results on the sheet provided.

CANDIDATE COPY
TO BE RETURNED TO EXAMINER UPON COMPLETION OF ANSWER**Initial Conditions:**

Today is 4/14/07. The daylight RO for 4/15/07 has called in sick. The only available RO replacement has the listed work hour history.

As the Unit Supervisor, determine if the RO replacement is able to work the 8 hour daylight shift on 4/15/2007 without violating the FFD program. Explain why or why not. Document your results on the sheet provided.

| Date | Hours | Status | Notes |
|---------|-----------|-----------------|--|
| 4/8/07 | OFF | Normal Day Off | Call out to cover shift (15 minute turnover) |
| 4/9/07 | 0800-1800 | Normal Day Off | Pre-scheduled training |
| 4/10/07 | 0700-1900 | Normal Work Day | 15 minute turnover |
| 4/11/07 | 0700-1900 | Normal Work Day | 15 minute turnover |
| 4/12/07 | 0700-1900 | Normal Work Day | 15 minute turnover |
| 4/13/07 | 0700-1900 | Normal Work Day | 15 minute turnover |
| 4/14/07 | 1100-1900 | Normal Day Off | Pre-scheduled training |
| | | | |

RESULTS:

Facility: **BVPS- Unit 1** Task No.: 0481-020-03-013
Task Title: Prepare a Clearance Tagout JPM No.: 2007 NRC RO A2
K/A Reference: 2.2.13 (3.6)

Examinee:

NRC Examiner:

Facility Evaluator:

Date:

Method of testing:

Simulated Performance: _____ Actual Performance: _____
Classroom X Simulator X 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: The plant is in Refueling Mode, no fuel is in the reactor. Both Residual Heat Removal Pumps are shutdown.

Task Standard: Identify the tags and sequence of placement for a tagout of RHR Pump 1RH-P-1B.

Required Materials: NONE

General References: NOBP-OP-1001, Clearance Program, Rev 00
NOP-OP-1001, Clearance/Tagging Program, Rev 8

Handouts: NOBP-OP-1001, Clearance Program, Rev 00
NOP-OP-1001, Clearance/Tagging Program, Rev 8
OP Manual Fig No. 10-1 8700-RM-410-1 Rev 12
Operation Manual Chapter 10M-10.3.C, Power Supply and Control
Switch Checklist

Initiating Cue: You are to identify the required clearance points (equipment), position (placement configuration), and sequence for clearing 1RH-P-1B, Residual Heat Removal Pump, for pump inspection. NO seal cooler work will be performed. SOMS is out of service. Document your results on the table provided.

Time Critical Task: NO

Validation Time: 25 minutes

(Denote Critical Steps with a check mark)

Note: This task is normally performed using the SOMS clearance computer and signed electronically. For this JPM, the SOMS computer is NOT available

EVALUATOR NOTE: Provide JPM handout and student copy of table.

✓ **Performance Step: 1** Candidate completes the table.
Standard: Candidates table matches the ANSWER KEY.

Comment:

Terminating Cue: When the candidate identifies and reports that all tags are identified, the evaluation for this JPM is complete.

Job Performance Measure No.: BVPS-1 2007 NRC RO A2

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

ANSWER KEY (DO NOT GIVE TO STUDENTS)

| Component ID | Component Description | Position | Sequence |
|----------------|--------------------------------|--------------------|----------|
| 1RH-P-1B-CS | Control switch for 1B RHR pump | Pull-To-Lock (PTL) | 1 |
| 4KVS-1DF-1F3 | Supply to RHR pump 1RH-P-1B | Racked Out | 2 |
| 1RH-6 | B PP Disch isol | Shut | 3 |
| 1RH-2 | B PP Suct isol | Shut | 4 |
| 1RH-202 OR | B PP Casing Drain | Open | 5 |
| 1RH-212 | B PP Disch Drain | Open | 6 |
| 1-RH-204 OR | B PP Seal CLR Vent | | |
| 1-RH-210 | B PP Disch Vent | | |
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Evaluator NOTE: Student may identify additional points. The points listed above are the minimum required for this JPM. All additional points must be evaluated to ensure the clearance is correct.

STUDENT COPY

| Component ID | Component Description | Position | Sequence |
|--------------|-----------------------|----------|----------|
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INITIAL CONDITIONS:

The plant is in Refueling Mode, no fuel is in the reactor. Both Residual Heat Removal Pumps are shutdown.

INITIATING CUE:

You are to identify the required clearance points (equipment), position (placement configuration), and sequence for clearing 1RH-P-1B, Residual Heat Removal Pump, for pump inspection. NO seal cooler work will be performed. SOMS is out of service. Document your results on the table provided.

Facility: BVPS-1 Task No.: 1320-008-03-023
Task Title: Determine equipment operability and plant conditions for mode change JPM No.: 2007 NRC SRO A.2
K/A Reference: 2.2.19 (3.1)

Examinee:

NRC Examiner:

Facility Evaluator:

Date:

Method of testing: **This JPM can be performed in any setting with the required references available.**

Simulated Performance: _____ Actual Performance: X
Classroom X 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: The plant is in Mode 5, making preparations to heat up and enter Mode 4.

1OM-52.4.R.2.A, Station Startup Mode 6 to Mode 1 Administrative & Local Actions, Attachment 8, OST Checklist for entry to Mode 4, has been completed **EXCEPT** for 1OST-7.8 and 1OST-39.1A.

Task Standard: 1OST-39.1A is UNSAT, and entry to Mode 4 is not allowed.

Required Materials: Partially completed Attachment 8
Completed 1OST-7.8 filled out SAT
Completed 1OST-39.1A filled out with battery terminal voltage less than required.

General References: 1OM-52.4.R.2.A, Attachment 8

Handouts: Partially completed Attachment 8
Completed 1OST-7.8 filled out SAT
Completed 1OST-39.1A filled out with battery terminal voltage less than required.

Initiating Cue: Review the Acceptance criteria of the completed OSTs, and make recommendations for Mode 4 entry.

Time Critical Task: No
BVPS-1 2007 NRC SRO A2

Validation Time: 12 minutes

(Denote Critical Steps with a √)

Start Time: _____.

Performance Step: 1 Reviews 1OST-7.8 and determines that it is completed SAT

Standard: Reviews acceptance criteria against performance of the surveillance and determines acceptance criteria is met.

Comment:

√ **Performance Step: 2** Reviews 1OST-39.1A and determines that battery terminal voltage is less than required.

Standard: Based upon review of acceptance criteria against actual surveillance results, battery terminal voltage is determined to be below the required limit

Comment:

√ **Performance Step: 3** Determines that Mode 4 entry cannot be made with inoperable battery

Standard: Reports that the battery is required for operation in Mode 4. Mode Change is not allowed.

Comment:

Terminating Cue: When the applicant makes Mode Change decision, the evaluation for this JPM is complete

Job Performance Measure No.: BVPS-1 2007 NRC SRO A.2

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: The plant is in Mode 5, making preparations to heat up and enter Mode 4.

1OM-52.4.R.2.A, Station Startup Mode 6 to Mode 1 Administrative & Local Actions, Attachment 8, OST Checklist for entry to Mode 4, has been completed **EXCEPT** for 1OST-7.8 and 1OST-39.1A

INITIATING CUE: Review the acceptance criteria of the completed OSTs, and make recommendation for Mode 4 entry.

Facility: **BVPS Unit 1** Task No.: 0481-005-03-043
Task Title: Select RWP and Determine Maximum Allowable Stay Time JPM No.: 2007 NRC RO/SRO A.3
K/A Reference: 2.3.10 (2.9/3.3)

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: _____ Actual Performance: X
Classroom X 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: A clearance is being prepared to work on RCP seal injection isolation valve MOV-1CH-308C. You are assigned to connect a drain hose to RCP 1C Seal Supply Drain, 1CH-324, to support the clearance.

Task Standard: Select the correct RWP and determine the maximum stay time according to the survey map dose rates. (Cannot perform task due to RWP limit of 25 mrem dose)

Required Materials: None

General References: 1/2-ADM-1630, Radiation Worker Practices, Rev.11

Handouts: Set of 3 RWP's (207-2001, 107-1001, 107-1032)
Radiation Survey Maps (Multiple maps, must include area with 20 mr/hr@30 cm)

Initiating Cue: The task will take you 1.5 hours to perform. Your EAD limits are 25 mr and 85 mr/hr. You are directed to **SELECT** the correct RWP from the given RWPs to perform this task, and calculate your **MAXIMUM** stay time using the appropriate survey map. Report your results when finished.

Time Critical Task: NO

Validation Time: 15 minutes

(Denote Critical Steps with a check mark)

START TIME: _____

| |
|--|
| NOTE: Provide the Candidate with the set of RWP's and Survey Map. |
|--|

✓ **Performance Step: 1** Select the correct RWP.

Standard: Candidate correctly selects RWP 107-1001 based on Operations clearance activities

NOTE: If asked, inform the Candidate that connecting the drain hose is considered a clearance activity. Continue the task.

Comment:

✓ **Performance Step: 2** Calculate the maximum stay time.

Standard: Candidate correctly calculates maximum stay time as 1.25 hrs.

$$\begin{array}{ccccccc} 25 \text{ mR} & \div & 20 \text{ mR/hr.} & = & 1.25 \text{ hrs.} \\ \text{(EAD dose limit)} & & \text{(highest dose rate)} & & \text{(Stay time)} \end{array}$$

Comment:

✓ **Performance Step: 3** Determines allowable stay time does not allow completion of the work.

Standard: Candidate determines that stay time is 1.25 hours, and estimated completion for the job is 1.5 hours

Comment:

| |
|--|
| Terminating Cue: When the Candidate reports the results, the evaluation for this JPM is complete. |
|--|

STOP TIME: _____

JPM No.: BVPS-1 2007 NRC RO A.3

Examinee's Name:

Examiner's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____

_____Response: _____

Result: Satisfactory/Unsatisfactory

Examiner's Signature: _____

Date: _____

INITIAL CONDITIONS:

A clearance is being prepared to work on RCP seal injection isolation valve MOV-1CH-308C. You are assigned to connect a drain hose to RCP 1C Seal Supply Drain, 1CH-324, to support the clearance.

INITIATING CUE:

The task will take you 1.5 hours to perform. Your EAD limits are 25 mr and 85 mr/hr. You are directed to **SELECT** the correct RWP from the given RWPs to perform this task, and calculate your **MAXIMUM** stay time using the appropriate survey map. Report your results when finished.

Facility: **BVPS Unit 1** Task No.: 1350-004-03-023

Task Title: Classify An Emergency Event JPM No.: 2007 NRC SRO A.4

K/A Reference: 2.4.41 (4.1)

Examinee: NRC Examiner:

Facility Evaluator: Date:

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X 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: The simulator scenario just completed.

Task Standard: The correct EPP classification is correctly made for the associated scenario.

Required Materials: NONE

General References: EPP/I-1a, Recognition And Classification Of Emergency Conditions, Rev. 10

Handouts: EPP/I-1a, Recognition And Classification Of Emergency Conditions, Rev. 10

Initiating Cue: As the Unit Supervisor, you are to classify the events in the scenario just completed in accordance with EPP/I-1a, Recognition and Classification of Emergency Conditions.

Time Critical Task: NO

Validation Time: 10 minutes

PERFORMANCE INFORMATION

(Denote Critical Steps with a check mark)

START TIME: _____

NOTE: The Candidate is being evaluated on classifying the events in the scenario just completed.

√ **Performance Step: 1** Classify the event in accordance with the Emergency Plan.

Standard: Candidate correctly classifies the event.

Scenario #1: Alert, Tab 1.2, Loss of RCS

Scenario #2: Site Area Emergency, Tab 2.2, CSF Red Path on Heat Sink

Scenario #3: Unusual Event, Tab 2.10

Scenario #4: Alert, Tab 1.2, Entry into EOP E-3

Scenario #5: Site Area Emergency, Tab 3.1, Loss of AC Power

Comment:

Terminating Cue: When the Candidate classifies the event, the evaluation for this JPM is complete.

STOP TIME: _____

VERIFICATION OF COMPLETION

JPM No.: BVPS-1 2007 NRC SRO A.4

Examinee's Name:

Examiner's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:Question: _____

_____Response: _____

Result: Satisfactory/Unsatisfactory

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS:

The simulator scenario just completed.

INITIATING CUE:

As the Unit Supervisor, you are to classify the events in the scenario just completed in accordance with EPP/I-1a, Recognition And Classification Of Emergency Conditions.