

Facility: Indian Point Unit 2 Task No.: N/A
 Task Title: Perform Control Room Log Entries JPM No.: 2007-NRC-A-1(R)
 K/A Reference: 2.1.18 (3.0)

Examinee: NRC Examiner:
 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: You are on shift prior to 0000. 2-PT-001 entries are partially completed.

Task Standard: All logs on pages 10-14 of 2-PT-001 taken accurately, documented correctly, Tech Specs. Evaluated and any required actions initiated in accordance plant procedures.

Required Materials: 2-PT-001 rev. 14

General References: 2-PT-001 rev. 14

Handouts: Partially completed 2-PT-001 rev. 14

Initiating Cue: It is 0000 on night shift and the duty watch standers are busy. You are directed to take 2-PT-001 logs pages 10-14 for 0000.

Time Critical Task: NO

Validation Time: 25 minutes

Simulator Setup

Reset to IC-TBD

Conditions should be 100% power with the following instrument readings:
Containment average temp (TI-12032A) ~132⁰F
CST level reading 19.5'
23 Accumulator level > 65%

(Denote Critical Steps with an asterisk)

NOTE: Candidate may identify deficiencies in any order.

- * **Performance Step: 1** Determines CST level is out of spec low
- Standard:** Red circle reading and enter comment
Document by circling reading in red and informing SM. Should recommend filling the CST. (Reference T.S. 3.7.6, action A.1 & A.2; verify B/U water supply w/in 4 hours and then every 12 hours and restore CST w/in 7 days.
- Cue:** When reported to CRS/SM if TS and recommended action are not given, ask what T.S. action/time applies and what action he recommends. (this applies to every OOS reading)
- Comment:**
- * **Performance Step: 2** Determines Containment Average Air temperature is out of spec high
- Standard:** Red circles reading and enters comment. Inform CRS/SM and recommend starting additional FCU's. (reference T.S.3.6.5 action A, 8 hours to restore)
- Cue:** (see above)
- Comment:**
- * **Performance Step: 3** Determines 22 SI Accumulator pressure is out of spec high
- Standard:** Red circles reading and enters comment. Informs CRS/SM and recommend adding nitrogen to the 22 Accumulator. (T.S. 3.5.1 Action B.1 restore in 24 hours)
- Cue:** (see above)
- Comment:**
- Terminating Cue:** When assigned log pages are complete, the evaluation for this JPM is complete.

Job Performance Measure No.: 2007-NRC-A-1(R)

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: It is 0000 on night shift. You are an extra RO on shift.

INITIATING CUE: It is 0000 on night shift and the duty watch standers are busy. You are directed to take 2-PT-001 logs pages 10-14 for 0000.

Facility: Indian Point Unit 2 Task No.: N/A
 Task Title: Review Control Room Log Entries JPM No.: 2007-NRC-A-1(S)
 K/A Reference: 2.1.18 (3.0)

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: The unit is at 100% power and you are the CRS at 0000. The surveillances required by 2-PT-001 are complete for 0000. Perform the CRS review of the logs and complete documentation in accordance with plant procedures.

Task Standard: All deficiencies noted in review of the logs. All corrective actions taken or in progress in accordance with OAP-17 and 2-PT-001 with deficiencies properly documented.

Required Materials: 2-PT-001 rev. 14 filled out and recent printout from "PICS HOURLY AUTO LOG REPORT FOR ROD POSITION"

General References: 2-PT-001 rev. 14

Handouts: Completed 2-PT-001 rev. 14 and a recent "PICS HOURLY AUTO LOG REPORT FOR ROD POSITION"

Initiating Cue: Review the log entries taken on at 0000 for approval

Time Critical Task: NO

Validation Time: TBD minutes

(Denote Critical Steps with an asterisk)

NOTE: Candidate may identify deficiencies in any order. Examiner put today's date

- * **Performance Step: 1** Determines That 22 SG Feed Flow indications fail channel check criteria (+/- 1.2 e5).
- Standard:** Refer to TS 3.3.1, table 3.3.1-1 functions unit 14 . Determine TS minimum is not met and action E applies (72 hours to trip Bistables). Document by circling reading and informing SM (Any step of this JPM)
- CUE** When asked what the LEFMs and PIC's read? They read the same as log readings.
- Comment:**
- * **Performance Step: 2** Determines that 22 Accumulator level is low out of spec and 23 SI Accumulator pressure is high out of spec.
- Standard:** Refers to TS 3.5.1 action D, two or more accumulators inoperable. Initiates actions to restore operability (recommends venting 23 and filling 22).
- Enters the action statement of TS 3.0.3.
- CUE** Acknowledge report as SM and direct him to continue his review and you will initiate the recommended actions.
- Comment:**
- * **Performance Step: 3** Determines that the RO failed to initial for items on page 16 of 27
- Standard:** Contacts RO to determine if the items were performed and have him initial them.
- CUE** If asked role play and initial "JV" in the blocks on page 16.
- Comment:** **This is not a tech spec issue since the logs were taken just incompletely annotated (not to standards).**
- Performance Step: 4** When log review is complete, the SRO should fill in section 7.1-7.4. documenting in the comments section a summary of the OOS readings and actions taken.
- Standard:** The SRO should fill in section 7.1-7.4. Documenting in the comments section a summary of the OOS readings and actions taken.
- Cue:** **Tell the SRO to include a list of anything he found that was not documented in the comments section to ensure that between the comments and the list it fully describes what he saw in his review.**

Comment:

Terminating Cue:

When log review is complete, the evaluation for this JPM is complete.

Job Performance Measure No.: 2007-NRC-A-1(S)

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 unit is at 100% power and you are the CRS at 0000.

INITIATING CUE: The surveillances required by 2-PT-001 are complete for 0000.
Perform the CRS review of the logs and complete documentation
in accordance with plant procedures.

Facility: Indian Point 2

Task No: N/A

Task Title: Review a completed COL and document deviations per OAP-019,
Component Verification and System Status Control

K/A Reference: 2.2.14 SRO 3.0

Job Performance Measure No:

2007-
NRC-A-
2(S)

Examinee:

NRC Examiner:

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: The plant is at 100% power. 2-COL-27.1.12 has been performed Per AOM direction. The NPO's have completed 2-COL-27.1.12 and provided the paperwork to you for review. The NPO's report that there are three items with comments and the COL is ready for SM review.

Task Standard: Components not positioned/documentated correctly are identified and/or documented per OAP-019

Required Materials: Marked up copy of 2-COL-27.1.12
OAP-019, Component Verification and System Status Control
Red ink Pens

General References: OAP-019

Initiating Cue: Review 2-COL-27.1.12 in accordance with OAP-019, Component Verification and System Status Control

Time Critical Task: No

Validation Time: 15 minutes

Performance Information

(Denote critical steps with a check mark)

1. Performance Step: Obtain COL and OAP-019 and review each

Standard: COL and OAP reviewed

Comment:

√ 2. Performance Step: Identifies Missing completion date and time on page 2

Standard: COL Completed date and time required prior to SM review.

CUE: As NPO fill in appropriate date and time

Comment:

√ 3. Performance Step: Identifies DF-125 is missing an initial in the "Initial" block

Standard: Initial verifier initials in blank provided. Get initials from operator prior to initialing for SM approval.

CUE: if requested provide suitable date and time as the NPO

Comment:

Performance Information

(Denote critical steps with a check mark)

√ 4. Performance Step: Reads comment related to missing label on DF-101 and notes second initial missing

Standard: Determines that the missing label is not a deviation from COL but the second initial is required. Has Second verifier initial prior to initialing for SM approval.

CUE: If requested, provide initial

Comment:

√ 5. Performance Step: Reviews comment on DF-53 and determines that the item is correctly documented.

Standard: Initials for DF-53 comment SM approval after review.

CUE: if asked "what the CTO was for or said?" role play the NPO and say the level instrument leaks and it should only be opened to verify level.

Comment:

√ 6. Performance Step: Reviews comment on JW-500 and determines that the item is a deviation from the COL since it does not meet the guidance in OAP-019 section 3.4 for checking a valve by alternate means.

Standard: Does NOT initial for SM approval and may discuss methods to check valve position by replacing handwheel etc. Does not sign for SM Review since a deviation has not been resolved.

Comment:

Terminating Cue: Identifies and dispositions discrepancies

VERIFICATION OF COMPLETION

Job Performance Measure No. 2007-NRC-A-2(S), Review completed COL 27.1.12 and perform SM review per OAP-019, Component Verification and System Status Control

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to complete:

Question Documentation:

Question:

Response:

Result: SAT or UNSAT

Examiner's signature and date: _____

CUE SHEET

Initial Conditions: The plant is at 100% power. 2-COL-27.1.12 has been performed Per AOM direction. The NPO's have completed 2-COL-27.1.12 and provided the paperwork to you for review. The NPO's report that there are three items with comments and the COL is ready for SM review.

Initiating Cue: Review 2-COL-27.1.12 in accordance with OAP-019, Component Verification and System Status Control

RETURN THIS TO THE EVALUATOR WHEN THE TASK IS COMPLETE

Facility: Indian Point 2Task No: N/ATask Title: Generate A Manual Tag-outK/A Reference: GKA 2.2.13 (3.6/3.8)Job Performance Measure No: 2007-
NRC-A-
3(R)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

Date: _____

Method of testing:Simulated Performance _____ Actual Performance XClassroom 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 at 100% power. A pump seal failure occurred on 23 CCW Pump. SOMS is not available for protective tagging. Maintenance has requested a tag-out of 23 CCW pump to replace the pump seal. The Field Support Supervisor has prepared Attachment 9.3, Tagout Cover Sheet for 23 CCW Pump Seal Replacement. The FSS has provided you with the following references:

- o EN-OP-102, Protective and Caution Tagging
- o 2-COL-4.1.1, Component Cooling System
- o Drawing 227781 Aux. Cooling System

Task Standard: 23 CCW pump is de-energized isolated from normal flows and pressures, with a vent or drain path available. The following components are the minimum required:

23 CCW Pump Control Switch on CCR panel SGF	PULLOUT
23 CCW Pump 6A 480V Breaker 12C	RACKED OUT
23 CCW Pump Control Switch in Superheater bldg.	PULLOUT
23 CCW Pump substation 12FD3 480V Breaker 2B	RACKED OUT
762A 23 CC Pump Disch. Isolation	CLOSED
760A 23 CC Pump Suction Isolation	CLOSED
23 CC Pump Drain and 23 CC Pump Vent	OPEN

(note: for a vent the most likely option is 1858A and for the drain either 1858B or drain 6151.)

NOTE: Other valves may be acceptable. Candidate may find other components to accomplish the task. The purpose is to determine appropriate TAGOUT points for a simple tagout. The candidate needs to provide isolation from normal flow and pressures, with a drain or vent path available, and de-energize the motor. Note that this pump has two power supplies and not tagging one of these is the most likely error.

Required Materials:

- o EN-OP-102, Protective and Caution Tagging, Attachment 9.2 Tagout Standards
- o 2-COL-4.1.1, Component Cooling System
- o Drawing 227781 Aux. Cooling System

General References: Same as required Materials, except that the candidate may refer to a complete copy of EN-OP-102 if requested.

Initiating Cue: Using the provided references, specify the type of tag, component number/names, required positions, and hang sequence necessary to provide a tagout boundary for 23 CCW Pump Seal Replacement.

Time Critical Task: No

Validation Time: TBD minutes

Performance Information

(Denote critical steps with a check mark)

1. Performance Step: Obtains correct procedure and references.

CUE: Evaluator provides copies of the required materials as requested:

- Completed Attachment 9.3
- EN-OP-102, Protective and Caution Tagging
- 2-COL-4.1.1, Component Cooling System
- Drawing 227781 Aux. Cooling System

Standard: Procedure and references obtained

Comment:

√ 2. Performance Step: Determines tag out points and required positions

Standard: Refers to supplied references and determines that the following points need to be placed in the positions listed:

Comment:

Performance Information

(Denote critical steps with a check mark)

√ **3. Performance Step:** Enter tagout points on the manual tagout tag sheet.

Standard: Refers to Attachment 9.2, Tagout Standards and lists placement sequences in the following order:

1.
 - 23 CCW Pump Control Switch on CCR panel SGF PULLOUT
 - 23 CCW Pump Control Switch in Superheater bldg. PULLOUT
2.
 - 23 CCW Pump 6A 480V Breaker 12C RACKED OUT
 - 23 CCW Pump substation 12FD3 480V Breaker 2B RACKED OUT
3.
 - 762A 23 CC Pump Disch Isolation CLOSED
 - 760A 23 CC Pump Suction Isolation CLOSED
4.
 - 23 CC Pump Drain or Vent OPEN
(note: for vent the most likely option is 1858A and for the drain either 1858B or drain 6151.)

NOTE: The critical sequence is control switch, breaker, close isolation valves, open drains/vents. The order of Disch and Suction Isolation is not critical.

NOTE: Candidate may choose additional steps such as removing control power fuses and opening vents. If the candidate does not identify the minimum points listed, additional scrutiny may be required to determine satisfactory completion of the JPM.

Comment:

Terminating Cue: JPM is complete when isolation points have been recorded, placement configuration determined, and placement sequence specified.

VERIFICATION OF COMPLETION

Job Performance Measure No. 2007-NRC-A-3(R), Generate A Manual Tag-out

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to complete:

Question Documentation:

Question:

Response:

Result: SAT or UNSAT

Examiner's signature and date: _____

Initial Conditions

Initial Conditions:

- The plant is at 100% power.
- A pump seal failure occurred on 23 CCW Pump.
- SOMS is not available for protective tagging.
- Maintenance has requested a tag-out of 23 CCW pump to replace the pump seal.
- The Field Support Supervisor has prepared Attachment 9.3, Tagout Cover Sheet for 23 CCW Pump Seal Replacement.
- The FSS has provided you with the following references:
 - EN-OP-102, Protective and Caution Tagging
 - 3-COL-EL-1, 6900 and 480 Volt Ac Distribution
 - 3-COL-CCW-1, Component Cooling Water System
 - Drawing 9321-F-27513 Sheet 1, Flow Diagram Aux Coolant Sys

Initiating Cue:

- The FSS has asked you to fill out Attachment 9.4, Tagout Tag Sheet to tag out 23 CCW Pump for Seal Replacement.
- Using the provided references, specify the type of tag, component number/names, required positions, and hang sequence necessary to provide a tagout boundary for 23 CCW Pump Seal Replacement.

Facility: Indian Point 2

Task No: N/A

Task Title: Review A Manual Tag-out

K/A Reference: GKA 2.2.13 (3.6/3.8)

Job Performance Measure No: 2007-NRC-A3(S)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

Date: _____

Method of testing:Simulated Performance _____ Actual Performance XClassroom 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 pump seal failure occurred on 23 CCW Pump. SOMS is not available for protective tagging. Maintenance has requested a tag-out of 23 CCW pump to replace the pump seal. The Field Support Supervisor has prepared a manual tagout.

Task Standard:

- Identifies Incorrect train/valve for Pump Discharge Valve – should be 762A not 762C for 23 CC Pump Discharge Isolation.
- Identifies that the tagout is does not include the alternate power supply from 12FD3 480V Breaker 2B or its' control switch.
- Identifies incorrect placement sequence for 23 CC Pump vent which should be performed after pump isolations are closed, instead of before.

Required Materials:

- EN-OP-102, Protective and Caution Tagging
- 2-COL-4.1.1, Component Cooling System
- Drawing 227781 Aux. Cooling System
- Tagout tag sheet with proposed isolation points, tag types, placement sequence, and placement configuration.

General References: Same as required Materials

Initiating Cue: The FSS has asked you to perform an independent review of the proposed tagout.

Time Critical Task: No

Validation Time: 20 minutes

Performance Information

(Denote critical steps with a check mark)

1. Performance Step: Obtains correct procedure and references.

CUE: FSS provides copies of the required materials:

- o Completed Attachment 9.3
- o EN-OP-102, Protective and Caution Tagging
- o 2-COL-4.1.1, Component Cooling System
- o Drawing 227781 Aux. Cooling System

Standard: Procedure and references obtained

Comment:

√ 2. Performance Step: Reviews tag out points and required positions

Standard: Refers to supplied references and determines that an incorrect component: 762A 21 CCW Pump Discharge Isolation is the wrong train. Identifies that 762C, 23 CCW Pump Discharge Isolation should be specified.

Comment:

√ 3. Performance Step: Reviews tag out points and required positions

Standard: Refers to supplied references and determines that an alternate power supply from substation 12FD3 480V Breaker 2B is not tagged along with its' control switch.

Performance Information

(Denote critical steps with a check mark)

√ **3. Performance Step:** Review tagout points on the manual tagout tag sheet

Standard: Refers to Attachment 9.2, Tagout Standards and reviews placement sequences in the following order:

- | | |
|--|------------|
| • 23 CCW Pump Control Switch on CCR panel SGF | PULLOUT |
| • 23 CCW Pump 6A 480V Breaker 12C
(control power removed) | RACKED OUT |
| • 23 CC Pump Drain 1858A Vent | OPEN |
| • 762A 23 CC Pump Discharge Isolation | CLOSED |
| • 760A 23 CC Pump Suction Isolation | CLOSED |
| • 23 CC Pump Drain 6151 | OPEN |

NOTE: The critical sequence is control switch, breaker, close isolation valves, open drains/vents. The order of Discharge and Suction Isolation is not critical.

NOTE: The critical sequence is control switches, breakers, close isolation valves, open drains/vents. The order of Discharge and Suction Isolation is not critical. The order of vent and drain is not critical provided that they come after Discharge and Suction isolation valves.

NOTE: Critical task in this step is to identify incorrect sequence for the pump drain

Comment: The actual manual tagout that incorporates the listed deficiencies will be generated in by the licensee staff prior to prep. Week validation.

Terminating Cue: JPM is complete when candidate has completed his review and written down the errors in the tagout that were detected.

VERIFICATION OF COMPLETION

Job Performance Measure No.2007-NRC-A-3-(S), Review a Manual Tag-out

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to complete:

Question Documentation:

Question:

Response:

Result: SAT or UNSAT

Examiner's signature and date: _____

Initial Conditions

Initial Conditions:

- A pump seal failure has occurred on 23 CCW Pump.
- SOMS is not available for protective tagging.
- Maintenance has requested a tag-out of 23 CCW pump to replace the pump seal.
- The Field Support Supervisor has prepared a manual tagout
- The FSS has provided you with the following references:
 - EN-OP-102, Protective and Caution Tagging
 - Completed Attachment 9.3
 - EN-OP-102, Protective and Caution Tagging
 - Others available on request.

Initiating Cue:

- The FSS has asked you to perform an independent review of the proposed tagout.

PERFORMANCE INFORMATION

Facility: Indian Point Unit 2 Task No.:

Task Title: Estimate the magnitude of the SG Tube leak in accordance with AOP-SG-1, Attachment 1 and recommend monitoring frequency based on criteria in Attachments 1 & 2 JPM No.: 2007-NRC-A-4(R)

K/A Reference: 2.3.11 Ability to control radiation releases Importance (2.7/3.2)

Examinee: NRC Examiner:

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: The Plant is operating at 100% Power at beginning of life. You are an extra RO on shift. A Primary to Secondary tube leak is being monitored per 2-AOP-SG-1 at two hour intervals and has been steady at 60 gpd for the last 6 hours.

Task Standard: Estimate SG Tube Leak Rate using AOP-SG-1 Attachment 1. Then, based on Attachment 1 and 2 guidance, recommend monitoring frequency going forward.

Required Materials: Calculator
AOP-SG-1 Rev. 7, Attachment 1 (page 39 of 69) and Attachment 2 (page 41 of 69)
Chemistry data book (contains RCS total gaseous activity)

General References: AOP-SG-1, SG Tube Leak

PERFORMANCE INFORMATION

Initiating Cue: You are directed by the CRS to estimate the primary to secondary SG tube leak rate in accordance with AOP-SG-1, Attachment 1 and based on your calculation provide recommendations for sampling frequency. Current readings are R-45 2.3 E-6 uc/cc
Condenser Air In-Leakage is 8.5 scfm

Time Critical Task: No

Validation Time: TBD Minutes

(Denote Critical Steps with an asterisk)

- Performance Step: 1** Determine Primary to secondary Leak rate using the following:
Refer to Chemistry Data book and record RCS total gaseous activity (3.0 E-3 uc/cc) in attachment 1
- Standard:** 3.0 E-3 uc/cc recorded in attachment 1 step 1
- Comment:**
- Performance Step: 2** Record Condenser In-Leakage from initiating cue.
- Standard:** Records 8.5 scfm in attachment 1 step 1
- Comment:**
- Performance Step: 3** Record R-45 readings from the initiating cue
- Standard:** Records 2.3 E-6 uc/cc in attachment 1 step 1
- Comment:**
- * **Performance Step: 4** Calculate Leak rate in GPD
- Standard:** Calculates:
 $((8.5 \text{ scfm} * 2.3 \text{ E-6 uc/cc}) / 3\text{E-3}) * 10800 = 70.4 \text{ gpd (+/- 2 gpd tolerance)}$
- Comment:**
- * **Performance Step: 5** Refers to guidance in Attachment 1 & 2 for frequency of leak rate determination.
- Standard:** Per guidance determine that leak rate is no longer stable (i.e. < 10%/hour change) and data should be taken every 15 minutes.
This should be reported to CRS.
- Cue:**
- Comment:**

Terminating Cue: When the leak rate and frequency of data collection are reported the JPM is complete.

Answer Key:

Attachment 1

Page 1 of 4

NOTE

For low levels of radioactivity as read on R-45, the estimated leak rate will be higher than actual.

1. Obtain the following
 - A. RCS total gaseous activity (from Chemistry Data Book or WINCDMS) 3.0 E-3 $\mu\text{Ci/cc}$
 - B. Condenser air inleakage 8.5 SCFM
 - C. R-45 reading 2.3 E-6 $\mu\text{Ci/cc}$

NOTE

A stable leak rate is defined as $\leq 10\%$ increase during a one hour period

2. Calculate primary to secondary leak rate using the following formula per the following requirements:
 - leak rate unstable or **NOT** positively identified as stable - every 15 minutes
 - leak rate stable - every 2 hours

$$\frac{[(B \text{ } \underline{8.5} \text{)} \times (C \text{ } \underline{2.3 E-6} \text{)} \times 10800]}{(A \text{ } \underline{3.0 E-3} \text{)}} = \underline{[\text{ } \underline{70.4} \text{]}}$$

Primary to secondary leak rate
(gpd)

Job Performance Measure No.: 2007-NRC-A-4(R)

Examinee's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

JPM CUE SHEET

INITIAL CONDITIONS: The Plant is operating at 100% Power at beginning of life. You are an extra RO on shift. A Primary to Secondary tube leak is being monitored per 2-AOP-SG-1 at two hour intervals and has been steady at 60 gpd for the last 6 hours.

INITIATING CUE: You are directed by the CRS to estimate the primary to secondary leak rate in accordance with AOP-SG-1, Attachment 1 & 2 and based on your calculation provide recommendations for sampling frequency.
Current readings are R-45 2.3 E-6 uc/cc
Condenser Air In-Leakage is 8.5 scfm

PERFORMANCE INFORMATION

Facility: Indian Point Unit 2 Task No.:

Task Title: Review the estimated primary to secondary leak rate in accordance with AOP-SG-1, Attachment 1 and determine what the frequency of data collection should be. JPM No.: 2007-NRC-A-4(S)

K/A Reference: 2.3.11 Ability to control radiation releases Importance (2.7/3.2)

Examinee: NRC Examiner:

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: The Plant is operating at 100% Power at beginning of life. You are the CRS on shift. A Primary to Secondary tube leak is being monitored per 2-AOP-SG-1 at two hour intervals and has been steady at 60 gpd for the last 6 hours.

Task Standard: Review the estimate SG Tube Leak Rate from AOP-SG-1 Attachment 1. Then, based on Attachment 1 and 2 guidance, determine the frequency data should be collected going forward.

Required Materials: Calculator
AOP-SG-1 Rev. 7, Attachment 1 (filled out) (page 39 of 69) and Attachment 2 (blank) (page 41 of 69)
Chemistry data book (contains RCS total gaseous activity)

General References: AOP-SG-1, SG Tube Leak

PERFORMANCE INFORMATION

Initiating Cue: You are the CRS and it has been two hours since the last primary to secondary leak rate determination. You have directed the RO to estimate the primary to secondary leak rate in accordance with AOP-SG-1 Attachment 1. You are given the completed calculation for review. Review the attachment 1 for accuracy and any changes in the frequency of data collection based on the criteria in attachments 1 & 2.

Time Critical Task: No

Validation Time: TBD Minutes

PERFORMANCE INFORMATION

(Denote Critical Steps with an asterisk)

- Performance Step: 1** Review the Primary to secondary Leak rate using the following:
Refer to Chemistry Data book and record RCS total gaseous activity (3.0 E-3 uc/cc) in attachment 1
- Standard:** Verify 3.0 E-3 uc/cc recorded in attachment 1 step 1
- Comment:** No error.
- Performance Step: 2** Verify Condenser In-Leakage from initiating cue.
- Standard:** Verify 8.5 scfm recorded in attachment 1 step 1
- Comment:** No error.
- Performance Step: 3** Verify R-45 readings from the initiating cue
- Standard:** Verify 2.3 E-6 uc/cc recorded in attachment 1 step 1
- Comment:** No error.
- * **Performance Step: 4** Verify Calculated Leak rate in GPD
- Standard:** Calculates:
 $((8.5 \text{ scfm} * 2.3 \text{ E-6 uc/cc}) / 3\text{E-3}) * 10800 = 70.4 \text{ gpd}$ (+/- 2 gpd tolerance) and **recognizes the RO made an error. Attachment 1 will have a leak rate of 80 gpd although all numbers to this point are correct.**
- Comment:**
- * **Performance Step: 5** Refers to guidance in Attachment 1 & 2 for frequency of leak rate determination.
- Standard:** Per guidance determine that leak rate is no longer stable (i.e. < 10%/hour change) and **data should be taken every 15 minutes.**
- Cue:**

PERFORMANCE INFORMATION

Comment:

If the CRS does not recognize the error and accepts the 80 gpd leak rate this will result in a frequency of 1X/15 min. as well since the leak rate is > 75 gpd.

Terminating Cue:

When the leak rate has been reviewed, any errors noted, and frequency of data collection determined the JPM is complete.

Job Performance Measure No.: 2007-NRC-A-4(S)

Examinee's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT _____ UNSAT _____

Examiner's Signature: _____ Date: _____

INITIAL CONDITIONS: The Plant is operating at 100% Power at beginning of life. You are the CRS on shift. A Primary to Secondary tube leak is being monitored per 2-AOP-SG-1 at two hour intervals and has been steady at 60 gpd for the last 6 hours.

INITIATING CUE: You are the CRS and it has been two hours since the last primary to secondary leak rate determination. You have directed the RO to estimate the primary to secondary leak rate in accordance with AOP-SG-1 Attachment 1. You are given the completed calculation for review. Review the attachment 1 for accuracy and any changes in the frequency of data collection based on the criteria in attachments 1 & 2.

Facility: Indian Point 2

Task No: _____

Task Title: CCR Offsite Communicator – NUE Notification

K/A Reference: _____

Job Performance Measure No: _____

2007-
NRC-A-
5(R)

Examinee: _____

NRC Examiner: _____

Date: _____

Method of testing:Simulated Performance X _____ Actual Performance _____

Classroom _____

X (may be
simulated
in CCR) _____

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 was tripped following indications of a 30 gpm RCS leak. The Shift Manager has implemented the Emergency Plan and declared a Notification of Unusual Event.

Task Standard: Control Room NUE Notification Checklist complete. Initial Roll Call initiated within 15 minutes.

Required Materials: Completed NYS Part 1 Form (Radiological Emergency Data Form) IP-EP-210 Att 9.3, CCR Offsite Communicator Checklist IP-EP-130, Emergency Notification and Mobilization Form EP-3, Control Room NUE Notification Checklist

General References: CCR Offsite Communicator Book located in emergency plan locker (contains copies of IP-EP-210 Att 9.3 and IP-EP-130, and blank forms)

Initiating Cue: The SM has directed you to assume the duties of the CR Offsite Communicator and perform Notification of Unusual Event Initial Notification per IP-EP-130; IP-EP-210, Att 9.3 CCR Offsite Communicator Checklist; and Form EP-3 Control Room NUE Notification Checklist.

Time Critical Task: Yes

Validation Time: 15 minutes

Performance Information

(Denote critical steps with a check mark)

EVALUATOR: Enter the time in the blank on line 4 of the Form EP-3 and enter the date and time in box 2 of the Part 1 form and times into column to the right of steps 1-3 . This starts the 15 minute clock for step 8 below.

1. Performance Step: Obtain CCR Offsite Communicator book from E-Plan cabinet

Standard: CCR Offsite Communicator book obtained

Comment:

2. Performance Step: Check if accountability is being performed

CUE: No, accountability is not being performed

Standard: Checks to see if accountability is being performed

Comment:

3. Performance Step: Inform SM and CCR staff that you have assumed duties of CCR Offsite Communicator

CUE: Acknowledge as CCR Staff and SM. Inform candidate that he is to make initial notification for NUE.

Standard: CCR staff and SM informed

Comment:

Performance Information

(Denote critical steps with a check mark)

4. Performance Step: Obtain completed and signed NYS Radiological Emergency Data Form Part 1 (Form EP-1) from the SM. Review form for completeness.

CUE: Provide completed Part 1 form to candidate. Also, provide Form EP-3 with steps 1-4 already completed by SM

Standard: Form obtained and reviewed.

Comment:

√ 5. Performance Step: **Fax the Part 1 form to the state and counties warning points and EOCs.**

CUE: When candidate locates the fax machine, cue that the CCR Admin Support clerk will operate the fax machine for you. Cue that the fax has been sent to state and counties warn points and EOCs.

Standard: Part 1 form simulated faxed.

6. Performance Step: Pick Up RECS Handset and initiate conference call

CUE: You have made 3 unsuccessful attempts to initiate a RECS conference call.

Standard: Determines RECS is not operational and advises Emergency Director (SM)

Comment:

Performance Information

(Denote critical steps with a check mark)

√ **7. Performance Step:** **Use Local Government Radio to make notifications. Verify Power on. Transmit message: "This is to report that an Unusual Event has been declared at Indian Point Energy Center. Standby for roll call."**

CUE: Remind candidate to Simulate using the Local Government Radio.
When candidate locates and simulates turning on the power switch, cue that the LGR power is on.

Standard: Simulates turning on LGR and transmitting message.

Comment:

√ **8. Performance Step:** **Enter time that roll call is being started**

Standard: Time entered is within 15 minutes of time in line 4

Comment:

√ **9. Performance Step:** **Initiate Roll Call by asking each location if they are on the line.**

CUE: As each location is polled, respond "(location) on the line."

Standard: Checks off each location and allows each location to identify themselves.
All locations polled.

Comment:

Performance Information

(Denote critical steps with a check mark)

√ 10. **Performance Step:** State "an emergency has been declared at the Indian Point Energy Center. A Part I notification Form #1, has been sent to you via Email and fax."

Standard: Prescribed message transmitted

Comment:

√ 11. **Performance Step:** Announce "New York State, do you acknowledge receipt of and Email or fax from IPEC."

CUE: NYS acknowledges receipt of email from IPEC

Standard: Checks for confirmation from NYS and repeats above message.

Comment:

12. **Performance Step:** Announce "If any location did not receive Email or fax or additional information is required contact NYS at (518) 292-2200 for assistance or Westchester County at(914)864-7890"

13. **Performance Step:** End Notification by saying "Indian Point Out at *(time)*"

Standard: Makes prescribed statement and enters time call completed in box 11

Comment:

Performance Information

(Denote critical steps with a check mark)

14. Performance Step: Check with SM to determine if Emergency Response Organization mobilization or notification is required

CUE: The Shift Manager has determined that Envelope A for All ERO mobilization will be used. The SM states that he will initiate the mobilization per envelope A while you continue with the notifications.

Standard: Ensures ERO notification/mobilization initiated

Comment:

√15. Performance Step: Notify NRC Resident

CUE: It is normal working hours. Acknowledge phone call as senior resident.

Standard: Simulates notification of resident inspector

Comment:

√16. Performance Step: Contact NRC by calling main number listed on ENS Phone

CUE: Trainee should simulate contacting ENS number. Acknowledge notification

Standard: Simulates notification of NRC on ENS line

Comment:

Performance Information

(Denote critical steps with a check mark)

17. Performance Step: Record comments. Date and sign form. Inform SM of completion of NUE notification.

CUE: SM acknowledges completion. Cue that the admin assistant clerk will fax the Part 1 form to the State, Counties, TSC, EOF, JIC.

Standard: Form completed and SM notified of completion of notifications.

Comment:

Terminating Cue: Notification checklist complete.

VERIFICATION OF COMPLETION

Job Performance Measure No. Audit RO-A-3, CCR Offsite Communicator – NUE
Notification

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to complete:

Question Documentation:

Question:

Response:

Result: SAT or UNSAT

Examiner's signature and date: _____

Initial Conditions

Initial Conditions:

- The plant was tripped following indications of a 30 gpm RCS leak.
- The Shift Manager has implemented the Emergency Plan and declared a Notification of Unusual Event.

Initiating Cue:

- The SM has directed you to assume the duties of the CR Offsite Communicator and perform Notification of Unusual Event Initial Notification per
 - IP-EP-130;
 - IP-EP-210, Att 9.3 CCR Offsite Communicator Checklist;
 - and Form EP-3 Control Room NUE Notification Checklist.

RETURN THIS TO THE EVALUATOR WHEN THE TASK IS COMPLETE

Facility: Indian Point 2

Task No: _____

Task Title: Make Protective Action Recommendations for an emergency plan event.K/A Reference: 2.4.44 SRO 4.0Job Performance Measure No: 2007-
NRC-A-
5(S)

Examinee: _____

NRC Examiner: _____

Date: _____

Method of testing:Simulated Performance _____ Actual Performance XClassroom 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 team is responding in E-0, Reactor Trip or Safety Injection.
- Containment Isolation Phase A and B have been confirmed.
- 21 and 22 Containment Spray Pumps failed to start and attempts to start pumps was unsuccessful.
- 24 Containment Fan Cooler Unit was inoperable prior to the event due to circuit breaker maintenance
- Containment Pressure is 38 psig and stable
- R-25 reading 19 R/hr and R-26 reading 21 R/hr
- RVLIS, Natural Circ Range reading 44%
- The Shift Manager has declared a General Emergency per EAL 4.1.4. (Confirmed phase B isolation signal following a confirmed LOCA with less than minimum containment cooling....and any indications of fuel clad damage).
- Wind speed: 7 meters/second
- Wind Direction: from 270 degrees at 10 meters
- Stability class: C
- MEANS is unavailable

Task Standard: Correct ERPAs identified and PARS made within 15 minutes of start.

Required Materials: IP-EP-410, Protective Action Recommendations

General References: IP-EP-410

Initiating Cue: Determine initial protective action recommendations per IP-EP-410.

Time Critical Task: Yes (15 minutes)

Validation Time: 15 minutes

Performance Information

(Denote critical steps with a check mark)

1. Performance Step: Obtains and reviews IP-EP-410

Standard: IP-EP-410 obtained

Comment: Record Start time _____

√ 2. Performance Step: **From Attachment 9.1 Flowchart For General Emergency Protective Action Decisions, and initial conditions provided, determines that GE has been declared. Recommend EVACUATION and implementation of KI Plan for ERPAS in 2 mile radius and 2-5 miles Downwind, and recommend SHELTERING remainder of ERPAS not evacuated.**

Standard: Recommend EVACUATION and implementation of KI Plan for ERPAS in 2 mile radius and 2-5 miles Downwind, and recommend SHELTERING remainder of ERPAS not evacuated.

CUE: If asked, Field Data and EPA PAGs are not yet available.

Comment:

√ 3. Performance Step: **From Attachment 9.2 Table III "Cross-Valley Plumes", identifies ERPAS within the 0-2 mile radius and 2-5 miles for evacuation.**

Standard: Recommend evacuation and KI plan for all ERPAS 0-2 miles and ERPAS 4, 5 & 6, 2-5 mile radius.

CUE: If asked, Field Data and EPA PAGs are not yet available.

Comment:

Performance Information

(Denote critical steps with a check mark)

√ **5. Performance Step: Recommend SHELTERING for remainder of ERPAS not evacuated**

Standard: Identifies need to recommend shelter all remaining ERPAS.

Comment:

√ **6. Performance Step: PARS completed within 15 minutes**

Standard: Recommendations complete within 15 minutes of start time.

Enter Time completed _____. Compare to start time in step 1.

Comment:

Terminating Cue: Initial PARS complete.

VERIFICATION OF COMPLETION

Job Performance Measure: Make Protective Action Recommendations for an emergency plan event.

Examinee's Name:

Date Performed:

Number of Attempts:

Time to complete:

Question Documentation:

Question:

Response:

Result: SAT or UNSAT

Examiner's signature and date: _____

Initial Conditions

Initial Conditions: The following plant conditions exist following a LOCA:

- The team is responding in E-0, Reactor Trip or Safety Injection.
- Containment Isolation Phase A and B have been confirmed.
- 21 and 22 Containment Spray Pumps failed to start and attempts to start pumps was unsuccessful.
- 24 Containment Fan Cooler Unit was inoperable prior to the event due to circuit breaker maintenance
- Containment Pressure is 38 psig and stable
- R-25 reading 19 R/hr and R-26 reading 21 R/hr
- RVLIS, Natural Circ Range reading 44%
- The Shift Manager has declared a General Emergency per EAL 4.1.4. (Confirmed phase B isolation signal following a confirmed LOCA with less than minimum containment cooling....and any indications of fuel clad damage).
- Wind speed: 7 meters/second
- Wind Direction: from 270 degrees at 10 meters
- Stability class: C
- MEANS is unavailable

Initiating Cue: You are directed by the SM to determine initial protective action recommendations per IP-EP-410. In the space below, write down the PAR and the effected ERPA's.

RETURN THIS TO THE EVALUATOR WHEN THE TASK IS COMPLETE.