FINAL

ES-301 **Administrative Topics Outline** **Form ES-301-1**

Facility: Vogtle 1 & 2 Date of Examination: 04/15/2013
Examination Level: RO ☑ SRO Operating Test Number: 2013-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations (a)	R, M	V-NRC-JP-14915-HL18 **Calculate Quadrant Power Tilt Ratio** **Description:** With data provided, candidate will perform 14915-1, Data Sheet 7, for QPTR monitoring. G2.1.7 (4.4 / 4.7)
Conduct of Operations (b)	R, M	V-NRC-JP-00012-HL18 **Identify On-Shift Manning Requirements for Conditions Provided** **Description:** Candidate will determine if the minimum on-shift staffing requirements are met and will determine if a crew member can fulfill two specific ERO positions. G2.1.5 (2.9* / 3.9)
Equipment Control (c)	R, N	V-NRC-JP-14825-HL18 **Evaluate Surveillance Test Data** **Description:** Candidate will evaluate quarterly valve test surveillance data and determine if the required acceptance criteria are met. G2.2.12 (3.7 / 4.1)
Radiation Control (d)	R, D, P	V-NRC-JP-00930-HL18 **Proper RWP Implementation** **Description:** Candidate will determine proper protective clothing requirements, projected dose, and whether the RWP is appropriate for the job task. G2.3.7 (3.5 / 3.6)
Emergency Procedures/Plan (e)	N/A	N/A

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

* Type Codes & Criteria:	(C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1; randomly selected)

NRC RO Admin Job Performance Measure "a"

Facility: Vogtle

Task No: V-LO-TA-17007

Task Title: Calculate Quadrant Power Tilt Ratio

JPM No: V-NRC-JP-14915-HL18

K/A Reference: G2.1.7 RO 4.4 SRO 4.7

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

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

Initial Conditions: **Unit 1 is at 100% RTP.**

Annunciator ALB10-E06, RADIAL TILT, is lit.

I&C reports that the Quadrant Power Tilt Monitor alarm is inoperable.

Initiating Cue: **The Shift Supervisor has directed you to, "Perform 14915-1, 'Special Conditions Surveillance Logs', for QPTR Monitoring, including the completion of Section 7.0, Evaluation and Review, using the following provided data".**

NI Channel	Detector	Current
1NI-41	A	409 mA
1NI-42	A	380 mA
1NI-43	A	450 mA
1NI-44	A	415 mA
1NI-41	B	435 mA
1NI-42	B	395 mA
1NI-43	B	460 mA
1NI-44	B	425 mA

Task Standard:	QPTR calculation per 14915-1, Data Sheet 7, performed correctly.
Required Materials:	14915-1, "Special Condition Surveillance Logs" Unit 1 Plant Technical Data Book, Tab 5.0 (rev. 150) Calculator Red Ink Pen, if requested
General References:	None
Time Critical Task:	No
Validation Time:	12 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

DATA SHEET 7 Sheet 1 of 2

QUADRANT POWER TILT RATIO

NOTES

- The arrangement of the NI rack layout is Channel I, II, IV, and III.
- If ALB 10 D02 or E02 annunciate and power is less than 50% performance of this data sheet is not required.
- If ALB 10 E06 annunciates and power is less than 10% performance of this data sheet is not required.
- Prior to taking readings from the upper and lower detector meters, change scales on the RANGE MILLI-AMPS Switch and then return it to its original position. This will wipe the switch contacts giving a more accurate reading.

1. Calculate and record Quadrant Power Tilt Ratio at least once per 12 hours using Sheet 2. PC based spreadsheet may be used for QPTR calculation if normalization factors used are verified current with the PTDB Tab 5.0 revision. If performing a manual calculation, compare PTDB Tab 5.0 with the PC Spreadsheet (if the PC is available) to verify normalization factors.

CUE: If candidate requests TILT DEVIATION from engineering, "Perform procedure with the information provided".

Standard: Candidate reviews NOTES and step. PC Spreadsheet is not available.

Comment:

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2. With one Power Range NI inoperable, obtain TILT DEVIATION from Reactor Engineering as determined from moveable incore detectors and verify it is within ±0.02 of QPTR obtained from the operable power range NIs. (Use avg and max of 3 operable NIs)

CUE: If candidate requests TILT DEVIATION from engineering, "Perform procedure with the information provided".

Standard: Candidate reviews step. No Power Range NI is inoperable.

Comment:

NOTE

A Fluke 8050A Digital Multimeter may be used to obtain more accurate current values for calculation of QPTR.

3. If a Fluke 8050A Digital Multimeter will be used to obtain current values from the NI Drawer, record instrument information below.

Instrument ID No._____

Cal Due Date_____

Standard: Candidate reviews step. A Multimeter will not be used.

Comment:

*** 4. Verify Quadrant Power Tilt Ratio is less than or equal to 1.02.**

Standard: Candidate verifies the calculated Quadrant Power Tilt Ratio value is 1.04 by correctly completing Sheet 2 of Data Sheet 7. NOTE: Rounding to three significant digits is not critical.

Comment:

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* 5. **With Quadrant Power Tilt Ratio greater than 1.02, initiate action in accordance with Technical Specification LCO 3.2.4** and continue to calculate and record QPTR once every 12 hours on sheet 2.

Standard: **Section 7.0, Evaluation and Review, is correctly completed to notify the Shift Supervisor that the calculated Quadrant Power Tilt Ratio exceeds the Technical Specification limit.**

Comment:

Terminating cue: Candidate returns initiating cue sheet.

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)

DATA SHEET 7 Sheet 2 of 2

DATE _____

TIME _____

NI Channel	Detector	Current	Factor*	
41	A	409 mA	x 1.131 =	**462.579** (1)
42	A	380 mA	x 1.129 =	**429.020** (1)
43	A	450 mA	x 1.020 =	**459.000** (1)
44	A	415 mA	x 1.103 =	**457.745** (1)
			Avg =	**452.086** (1)

QPTR (Upper) = Max(upper) / Avg(upper) = **1.02** (2)

NI Channel	Detector	Current	Factor*	
41	B	435 mA	x 1.077 =	**468.495** (1)
42	B	395 mA	x 1.090 =	**430.550** (1)
43	B	460 mA	x 1.000 =	**460.000** (1)
44	B	425 mA	x 1.060 =	**450.500** (1)
			Avg =	**452.386** (1)

QPTR (Lower) = Max(lower) / Avg(lower) = **1.04** (2)

QPTR = Max of QPTR(upper) or QPTR(lower) = **1.04**

TILT DEVIATION = N/A
(from Reactor Engineering if applicable)

COMPLETED BY *Candidate*

Shift Supervisor Review: _____/_____/_____
Initial Date Time

*Factor = Normalization Factor from Plant Technical Data Book tab 5.0
Note 1 = Calculations should be performed to 3 decimal places
Note 2 = Round to 2 decimal places (if the 3rd decimal is ≥5 round up, if 3rd decimal is <5, round down)

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)

7.0 **EVALUATION AND REVIEW**

7.1 **TEST PURPOSE**

Special Condition(s):

Quadrant Power Tilt Monitor alarm is inoperable

Data Sheet(s) completed (Circle Appropriate Sheets):

1 2 3 4a 4b 5 6 (7) 8 9 10 11 12 13 14 15 16 17 18

7.2 Results obtained through the performance of this procedure meet the ACCEPTANCE CRITERIA of Section 6.0.

☐ YES ☒ NO

7.3 IF no was checked, immediately notify the SS and initiate action in accordance with the actions specified on the data sheet(s) not meeting the acceptance criteria.

7.4 Comments (include any abnormal conditions and corrective actions taken):

Lower QPTR exceeds 1.02

Test Completed and SS Notified: _____ _____ _____

Supervisory Review: _____ _____ _____

Signature Date Time

Verification of Completion

Job Performance Measure No: V-NRC-JP-14915-HL18

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: Unit 1 is at 100% power.

Annunciator ALB10-E06, RADIAL TILT, is lit.

I&C reports that the Quadrant Power Tilt Monitor alarm is inoperable.

Initiating Cue: The Shift Supervisor has directed you to, "Perform 14915-1, 'Special Conditions Surveillance Logs', for QPTR Monitoring, including the completion of Section 7.0, Evaluation and Review, using the following provided data.

NI Channel	Detector	Current
1NI-41	A	409 mA
1NI-42	A	380 mA
1NI-43	A	450 mA
1NI-44	A	415 mA
1NI-41	B	435 mA
1NI-42	B	395 mA
1NI-43	B	460 mA
1NI-44	B	425 mA

NRC RO Admin Job Performance Measure "b"

Facility: Vogtle

Task No: N/A

Task Title: Identify On-Shift Manning Requirements for Conditions Provided

JPM No: V-NRC-JP-00012-HL18

K/A Reference: G2.1.5 RO 2.9* SRO 3.9

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

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

Initial Conditions: **Both Units are at 100% power.**

It is night shift on a holiday, and maximum off-time has been encouraged by Operations Management.

The SAT Operator and the Wilson Operator are not required to be manned.

All required Security positions are manned.

The table below represents the Operations personnel who have arrived to receive turnover and their qualification status.

OPERATORS	LICENSE STATUS / QUALIFICATIONS
Bill	SRO V-OPS-SS, V-ERO-CR01, V-ERO-CR10, V-OPS-STA
Stephen Amy	SRO V-OPS-USS, V-ERO-CR02, V-ERO-CR10, V-OPS-STA, V-FP-FIRE BRIGADE LEADER
Matt	SRO V-OPS-STA, V-FP-FIRE BRIGADE LEADER
Kevin Britt Jayme Rodney	RO V-OPS-RO/BOP, V-ERO-CR04
Neal Robert Ray Elizabeth Terry Jeff	NLO V-OPS-SO, V-FP-FIRE BRIGADE

Initiating Cue: **Using 00012-C, "Shift Manning Requirements", and the operations crew shown in the table provided, give a written response to the following questions:**

1) **Does the crew shown in the table provided satisfy the Minimum Shift Manning requirements of 00012-C, Data Sheet 1? (NOTE: Only consider the operations crew members and not the Emergency Plan Section of Data Sheet 1.)**

2) **Based on the crew shown in the table provided and 00012-C, can "Elizabeth" simultaneously fill the positions on Data Sheet 1 of Unit #2 SO and Fire Brigade Member?**

Task Standard: Upon successful completion of this JPM, the examinee will correctly:

1. Determine if the minimum shift manning requirements of 00012-C, "Shift Manning Requirements", are met.
2. Determine if an operator can simultaneously fill two required shift positions on Data Sheet 1 of 00012-C.

Required Materials: 00012-C, "Shift Manning Requirements"

General References: None

Time Critical Task: No

Validation Time: 10 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

*** 1. Determine if the minimum shift manning requirements of 00012-C, "Shift Manning Requirements", are met.**

Data Sheet 1 of 00012-C and available operations personnel table are reviewed to determine if minimum shift manning requirements are met.

NOTE TO EXAMINER: Completion of Data Sheet 1 is NOT required to meet the critical step. The following is an example provided to aid debrief discussions with the candidate, if required. Name/position combinations may vary.

Approved By J. B. Stanley	Vogtle Electric Generating Plant	Procedure Number Rev 00012-C 17.2
Date Approved 03/17/2009	SHIFT MANNING REQUIREMENTS	Page Number 5 of 6

DATA SHEET 1 Sheet 1 of 2

Minimum Shift Manning (Either Unit in Mode 1-4)

Date: _____ Shift (Day/Night):_____

POSITION	UNIT #1	COMMON	UNIT #2
Shift Manager V-OPS-SS, V-ERO-CR01, and V-ERO-CR10		Bill Also assigned as Emergency Director	
SS V-OPS-USS, V-ERO-CR02, AND V-ERO-CR10	Stephen Also assigned as ENS Communicator		Amy Also assigned as ENS Communicator
OATC V-OPS-RO/BOP	Kevin		Britt
UO V-OPS-RO/BOP and V-ERO-CR04	Jayme Also assigned as ENN Communicator		Rodney Also assigned as ENN Communicator
SO V-OPS-SO	Terry SO/NPO		Jeff SO/NPO
STA (May be assigned other duties) V-OPS-STA		Bill (SM, or SSS or SS not assigned to FB or ENN Communicator)	
Fire Team Captain V-FP-FIRE BRIGADE LEADER		Matt SSS, or SS C&T	
FB Member V-FP-FIRE BRIGADE		1. Neal SO(Also fulfills Common SO FSAR req)	
FB Member V-FP-FIRE BRIGADE		2. Robert SO	
FB Member V-FP-FIRE BRIGADE		3. Ray SO	
FB Member V-FP-FIRE BRIGADE		4. Elizabeth SO	
Security V-ERO-SEC or V-ERO-SEC02		Joe Per Security Procedure 90101-C	
SAT Operator V-OPS-SO-OAO	Assigned per procedure 13419-C	5. N/A SO/NPO/SRO	
Wilson Operator V-OPS-WILSON BLKSTRT	Assigned per procedure 13419-C	6. N/A SO/NPO	

Cue: ***If asked about the SAT Operator, Wilson Operator, or Security, "See initial conditions".***

Standard: **Candidate determines minimum shift manning requirements of 00012-C, "Shift Manning Requirements", ARE met.**

Comment:

*** 2. Determine if an operator can simultaneously fill two required shift positions on Data Sheet 1 of 00012-C.**

Data Sheet 1 of 00012-C is reviewed to determine if a qualified NLO can simultaneously fill the Unit #2 SO and Fire Brigade Member positions.

A note at the bottom of Data Sheet 1 reads, "1. Personnel may NOT be assigned to more than one position unless specifically noted next to the position label". There is no allowance for either of these two positions to fill other positions simultaneously.

SO V-OPS-SO	Terry SO/NPO		Jeff SO/NPO
STA (May be assigned other duties) V-OPS-STA		Bill (SM, or SSS or SS not assigned to FB or ENN Communicator)	
Fire Team Captain V-FP-FIRE BRIGADE LEADER		Matt SSS, or SS C&T	
FB Member V-FP-FIRE BRIGADE		1. Neal SO(Also fulfills Common SO FSAR req)	
FB Member V-FP-FIRE BRIGADE		2. Robert SO	
FB Member V-FP-FIRE BRIGADE		3. Ray SO	
FB Member V-FP-FIRE BRIGADE		4. Elizabeth SO	

1. Personnel may NOT be assigned to more than one position unless specifically noted next to the position label.

Standard: **Candidate determines that the operator can NOT simultaneously fill the two required shift positions.**

Comment:

Terminating cue: Candidate returns initiating cue sheet.

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)

1) **Does the crew shown in the table provided satisfy the Minimum Shift Manning requirements of 00012-C, Data Sheet 1? (NOTE: Only consider the operations crew members and not the Emergency Plan Section of Data Sheet 1.)**

YES

2) **Based on the crew shown in the table provided and 00012-C, can "Elizabeth" simultaneously fill the positions on Data Sheet 1 of Unit #2 SO and Fire Brigade Member?**

NO

Verification of Completion

Job Performance Measure No: V-NRC-JP-00012-HL18

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: **Both Units are at 100% power.**

It is night shift on a holiday, and maximum off-time has been encouraged by Operations Management.

The SAT Operator and the Wilson Operator are not required to be manned.

All required Security positions are manned.

The table below represents the Operations personnel who have arrived to receive turnover and their qualification status.

OPERATORS	LICENSE STATUS / QUALIFICATIONS
Bill	SRO V-OPS-SS, V-ERO-CR01, V-ERO-CR10, V-OPS-STA
Stephen Amy	SRO V-OPS-USS, V-ERO-CR02, V-ERO-CR10, V-OPS-STA, V-FP-FIRE BRIGADE LEADER
Matt	SRO V-OPS-STA, V-FP-FIRE BRIGADE LEADER
Kevin Britt Jayme Rodney	RO V-OPS-RO/BOP, V-ERO-CR04
Neal Robert Ray Elizabeth Terry Jeff	NLO V-OPS-SO, V-FP-FIRE BRIGADE

Initiating Cue: **Using 00012-C, "Shift Manning Requirements", and the operations crew shown in the table provided, give a written response to the following questions:**

1) **Does the crew shown in the table provided satisfy the Minimum Shift Manning requirements of 00012-C, Data Sheet 1? (NOTE: Only consider the operations crew members and not the Emergency Plan Section of Data Sheet 1.)**

2) **Based on the crew shown in the table provided and 00012-C, can "Elizabeth" simultaneously fill the positions on Data Sheet 1 of Unit #2 SO and Fire Brigade Member?**

NRC RO Admin Job Performance Measure "c"

Facility: Vogtle

Task No: N/A

Task Title: Evaluate Surveillance Test Data

JPM No: V-NRC-JP-14825-HL18

K/A Reference: G2.2.12 RO 3.7 SRO 4.1

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

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

PART 1

Initial Conditions: **Unit 1 is at 100% RTP.**

14825-1, "Quarterly Inservice Valve Test", is being performed for the following Train A Atmospheric Relief Valves (ARVs):

1-PV-3000
1-PV-3030

Initiating Cue: **The Shift Supervisor has directed you to, "Perform Steps 4.5 and 4.6 of 14825-1 and record the Reference Stroke Times and the High and Low Acceptance Criteria Limits on the provided Data Sheet 12".**

PART 2
(PROVIDE WHEN CANDIDATE COMPLETES PART 1)

Initial Conditions: Unit 1 is at 100% RTP.

14825-1, "Quarterly Inservice Valve Test", for the following Train A Atmospheric Relief Valves (ARVs) is complete:

1-PV-3000
1-PV-3030

The results of the surveillance tests are as follows:

Valve Number	Exercise (EXER) Test	Iso Valve Stroke Test	Position Indication Test	Fail Safe Test	Actual Stroke Open Time	Actual Stroke Closed Time
1-PV-3000	Sat	Sat	Sat	Unsat	21.7 sec.	23.6 sec.
1-PV-3030	Sat	Sat	Unsat	Sat	25.9 sec.	27.2 sec.

Initiating Cue: The Shift Supervisor has directed you to, "Complete Data Sheet 12 of 14825-1 using the data provided and determine if the Acceptance Criteria of Section 6.0 are met".

Task Standard:	14825-1, Data Sheet 12, completed correctly.
Required Materials:	14825-1, "Quarterly Inservice Valve Test" (pages 1-7, 96-97, and 129 of marked up version) 14825-1, Data Sheet 12 (partially completed for candidate use) Unit 1 In-Service Test (IST) Data Book Calculator Red Ink Pen, if requested
General References:	None
Time Critical Task:	No
Validation Time:	14 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

BEGIN PART 1

*** 4.5 Record the Reference Stroke Time [obtained from the In-Service Test (IST) Data Book] for the valve(s) to be tested.**

DATA SHEET 12 - MAIN STEAM SYSTEM
TECHNICAL SPECIFICATIONS APPLICABILITY - MODES 1, 2, 3
(TEST SECTION 5.3.12)

TEST PURPOSE:

☒ Surveillance
☐ Maintenance Retest-MWO#_____
☐ Other _____

VALVE(TRAIN) DESCRIPTION	VALVE TYPE	VALVE TEST DATE	INIT POST	SAFETY POS	EXER TEST	ISO VALVE STROKE	POS IND TEST	REF STROKE TIME
*1-PV-3000 SG-1 ARV (A)	EHV		O (C)	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O 19.9 C 20.5
*1-PV-3010 SG-2 ARV (B)	EHV	N/A	O C	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O C
*1-PV-3020 SG-3 ARV (B)	EHV	N/A	O C	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O C
*1-PV-3030 SG-4 ARV (A)	EHV		O (C)	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O 21.2 C 21.9

NOTE TO EXAMINER: The INIT POST (initial position) column may be filled in later, and is not required for this critical step. There is no allowable error in the candidate's Reference Stroke Time data since it taken directly from the IST Data Book.

Standard: Candidate correctly completes REF STROKE TIME column.

Comment:

NOTES prior to Step 4.6

NOTES

- The method used to determine valve tolerance factor is per the following table. The tolerance factor is dependent on the valve Reference-Stroke Time and actuator type [i.e., Motor Operated Valves (MOVs) versus all other types of Power Operated Valves (POVs)]. Also, valves with reference-stroke times of less than two (2) seconds may be exempted from applying a tolerance factor IF maximum allowable stroke time is set at 2 seconds.

Reference Stroke Time	Tolerance	Low Limit Correction Factor	High Limit Corr Factor
POVs: ≤10 sec	±50%	0.50	1.50
>10 sec	±25%	0.75	1.25
MOVs: ≤10 sec	±25% OR ±1 sec*	0.75 OR -1 sec*	1.25 OR +1 sec*
>10 sec	±15%	0.85	1.15

*Whichever Is Greater

- IF High Acceptance Time Limit is greater than Max Stroke Time, record Max Stroke Time as High Acceptance Time Limit.

NOTE TO EXAMINER: Candidate will use the POV line (>10 sec.) in the table to determine allowable tolerance factor. The ARV valve type is an EHV.

Standard: Candidate reviews NOTES to determine correct tolerance factor.

Comment:

* 4.6. **Calculate <u>AND</u> record, on applicable data sheet, Acceptance Criteria Limits for the respective valves using the Reference Stroke Time multiplied by the tolerance factor or record limits from the In Service Test (IST) Data Book.**

DATA SHEET 12 - MAIN STEAM SYSTEM
TECHNICAL SPECIFICATIONS APPLICABILITY - MODES 1, 2, 3
(TEST SECTION 5.3.12)

TEST PURPOSE:

☒ Surveillance
☐ Maintenance Retest-MWO#_____
☐ Other _____

VALVE(TRAIN) DESCRIPTION	VALVE TYPE	VALVE TEST DATE	INIT POST	SAFETY POS	EXER TEST	ISO VALVE STROKE	POS IND TEST	REF STROKE TIME	LOW LIMIT	HIGH LIMIT
*1-PV-3000 SG-1 ARV (A)	EHV		O (C)	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O 19.9 C 20.5	O 14.9 C 15.4	O 24.9 C 25.6
*1-PV-3010 SG-2 ARV (B)	EHV	N/A	O C	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O C	O C	O C
*1-PV-3020 SG-3 ARV (B)	EHV	N/A	O C	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O C	O C	O C
*1-PV-3030 SG-4 ARV (A)	EHV		O (C)	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O 21.2 C 21.9	O 15.9 C 16.4	O 26.5 C 27.4

Standard: **Candidate correctly determines the Acceptance Criteria High and Low Limits from the IST Data Book and records on Data Sheet 12. NOTE: The candidate may re-calculate the limits to confirm the data, but is not required to do so.**

Comment:

<u>Candidate turns in Part 1 of JPM.</u>

NOTE TO EXAMINER: When candidate returns first cue sheet, give the candidate the second cue sheet.

BEGIN PART 2

*** Complete Data Sheet 12 of 14825-1 using the data provided.**

EXER TEST	ISO VALVE STROKE	POS IND TEST	REF STROKE TIME	LOW LIMIT	HIGH LIMIT	MAX STROKE TIME	** FAIL SAFE TEST	ACT RESV TEMP °F	ACTUAL STROKE TIME	STROKE TIME TEST
(Sat) Unsat	(Sat) Unsat	(Sat) Unsat	O 19.9 C 20.5	O 14.9 C 15.4	O 24.9 C 25.6	28	Sat (Unsat)	N/A	O 21.7 C 23.6	(Sat) Unsat
Sat Unsat	Sat Unsat	Sat Unsat	O C	O C	O C	28	Sat Unsat		O C	Sat Unsat
Sat Unsat	Sat Unsat	Sat Unsat	O_____ C	O_____ C	O_____ C	28	Sat Unsat		O_____ C	Sat Unsat
(Sat) Unsat	(Sat) Unsat	Sat (Unsat)	O 21.2 C 21.9	O 15.9 C 16.4	O 26.5 C 27.4	28	(Sat) Unsat	N/A	O 25.9 C 27.2	(Sat) Unsat

Standard: Candidate correctly completes Data Sheet 12 using the data provided.

Comment:

*** Determine if the Acceptance Criteria of Section 6.0 are met.**

6.2 The Exercise, Fail Safe AND Position Indication Verification Test results are recorded on the applicable data sheet as SAT indicating that each valve tested exercised satisfactorily, failed CLOSED on loss of power, AND the position indication corresponded to actual valve position (recorded in Step 5.2.3).

* See Test Section 5.3.12 prior to testing
** Not required for OPERABILITY.

Results obtained through performance of this procedure meet ACCEPTANCE CRITERIA of Section 6.0. ☐ YES ☒ NO

IF NO was checked, refer to Section 7.0, EVALUATION AND REVIEW.

Standard: **Candidate determines that the Acceptance Criteria of Section 6.0 are NOT met based on UNSAT 1-PV-3000 Fail Safe Test and 1-PV-3030 Position Indication Test results.**

Comment:

Terminating cue: Candidate returns initiating cue sheet.

Verification of Completion

Job Performance Measure No: V-NRC-JP-14825-HL18

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: Unit 1 is at 100% RTP.

14825-1, "Quarterly Inservice Valve Test", is being performed on the following Train A Atmospheric Relief Valves (ARVs):

1-PV-3000
1-PV-3030

Initiating Cue: The Shift Supervisor has directed you to, "Perform Steps 4.5 and 4.6 of 14825-1 and record the Reference Stroke Times and the High and Low Acceptance Criteria Limits on the provided Data Sheet 12".

PART 2

Initial Conditions: Unit 1 is at 100% RTP.

14825-1, "Quarterly Inservice Valve Test", on the following Train A Atmospheric Relief Valves (ARVs) is complete:

1-PV-3000
1-PV-3030

The results of the surveillance tests are as follows:

Valve Number	Exercise (EXER) Test	Iso Valve Stroke Test	Position Indication Test	Fail Safe Test	Actual Stroke Open Time	Actual Stroke Closed Time
1-PV-3000	Sat	Sat	Sat	Unsat	21.7 sec.	23.6 sec.
1-PV-3030	Sat	Sat	Unsat	Sat	25.9 sec.	27.2 sec.

Initiating Cue: The Shift Supervisor has directed you to, "Complete Data Sheet 12 of 14825-1 using the data provided and determine if the Acceptance Criteria of Section 6.0 are met".

NRC RO / SRO Admin Job Performance Measure "d"

Facility: Vogtle

Task No: N/A

Task Title: Determine Minimum Protective Clothing Requirements and Total Projected Dose, and Determine if task can be completed without exceeding any Radiological Limits

JPM No: V-NRC-JP-00930-HL18

K/A Reference: G2.3.7 RO 3.5 SRO 3.6

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

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

Initial Conditions: **Unit 1 is at 100% power.**

You have been assigned to close and danger tag 1-1204-U4-111 in Unit 1 containment.

You have been briefed by HP on the limitations of RWP 13-0101.

HP has permitted the minimum protective clothing requirements stated in the RWP.

Your accumulated dose for this year to date is 960 mrem.

The TOTAL round-trip TRANSIT dose will be 6 mrem.

The TOTAL time at the job site will be 5 minutes.

Assume neutron dose exposure is negligible.

Initiating Cue: **Using RWP 13-0101 and the survey map of the Unit 1 containment work area, determine and document in the table below:**

a. Your protective clothing requirements.
b. Your projected total gamma dose.
c. If you can or cannot perform the task without exceeding any limits. If not, then state the reason.

Protective clothing requirements	
Projected total gamma dose	
Can you complete this task without exceeding any limits?	
REASON, if applicable	

Task Standard:	Upon successful completion of this JPM, the examinee will correctly: 1. Identify the protective clothing requirements. 2. Calculate the projected total gamma dose. 3. Determine if the task can be performed without exceeding any limits, and if not, then state the reason.
Required Materials:	Calculator Containment survey map RWP 13-0101
General References:	NMP-HP-001, "Radiation Protection Standard Practices" 00930-C, "Radiation and Contamination Control"
Time Critical Task:	No
Validation Time:	15 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

*** Determine protective clothing requirements.**

Refer to RWP 13-0101 "Protective Clothing Requirements", which states the minimum requirements for a "C" zone are booties, gloves, and a lab coat.

Cue: ***If asked if the dress requirements were changed per HP direction, "See initial conditions".***

Standard: **Correct protective clothing requirements determined.**

Comment:

*** Calculate projected total gamma dose.**

Using survey map, a dose rate of 84 mrem/hour at the valve is determined.

The tagging task will take 5 minutes.

84 mrem/hour (1 hour / 60 minutes) (5 minutes) = 7 mrem [no range on calculated value]

Transit dose of 6 mrem is added to calculated dose.

7 mrem + 6 mrem = 13 mrem [no range on calculated value]

Standard: **Projected total dose calculated to be 13 mrem [no range on final value].**

Comment:

*** Determine if the task can be performed without exceeding any limits**

From NMP-HP-001, the admin annual dose limit is 1000 mrem.

Total calculated annual dose would be 960 mrem + 13 mrem = 973 mrem (annual limit is not exceeded)

RWP 13-0101 task dose rate limit is 80 mrem/hour. Dose rate at valve is 84 mrem/hour on the survey map (task dose rate limit is exceeded).

RWP 13-0101 task dose limit is 15 mrem. Calculated dose received is 13 mrem (task dose limit is not exceeded)

NOTE TO EXAMINER: Examinee may indicate that 13 mrem exceeds the task dose limit since HP briefings require workers to notify HP when they reach 80% of their task dose limit (12 mrem for this task). This response is acceptable.

Standard: **Determination is made that the task can NOT be performed without exceeding a limit.**

Comment:

*** State the reason that the task was NOT permitted.**

Examinee identifies that the RWP task dose rate limit is exceeded (dose rate at valve is 84 mrem/hour with an RWP task dose rate limit of 80 mrem/hour)

NOTE TO EXAMINER: Examinee may indicate that 13 mrem exceeds the task dose limit since HP briefings require workers to notify HP when they reach 80% of their task dose limit (12 mrem for this task). This response is acceptable.

Standard: **Correct reason is provided for why the task can NOT be performed.**

Comment:

Terminating cue: Candidate returns initiating cue sheet.

KEY (DO NOT PROVIDE TO CANDIDATES)

Protective clothing requirements	*Booties* *Gloves* *Lab Coat*
Projected total gamma dose	*13 mrem*
Can you complete this task without exceeding any limits?	*NO*
REASON, if applicable	*RWP task dose rate limit of 80 mrem/hour is exceeded* NOTE: Examinee may indicate that 13 mrem exceeds the task dose limit since HP briefings require workers to notify HP when they reach 80% of their task dose limit (12 mrem for this task). This response is acceptable.

Verification of Completion

Job Performance Measure No: V-NRC-JP-00930-HL18

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: Unit 1 is at 100% power.

You have been assigned to close and danger tag 1-1204-U4-111 in Unit 1 containment.

You have been briefed by HP on the limitations of RWP 13-0101.

HP has permitted the minimum protective clothing requirements stated in the RWP.

Your accumulated dose for this year to date is 960 mrem.

The TOTAL round-trip TRANSIT dose will be 6 mrem.

The TOTAL time at the job site will be 5 minutes.

Assume neutron dose exposure is negligible.

Initiating Cue: Using RWP 13-0101 and the survey map of the Unit 1 containment work area, determine and document in the table below:

a. Your protective clothing requirements.
b. Your projected total gamma dose.
c. If you can or cannot perform the task without exceeding any limits. If not, then state the reason.

Protective clothing requirements	
Projected total gamma dose	
Can you complete this task without exceeding any limits?	
REASON, if applicable	

FINAL

ES-301 **Administrative Topics Outline** **Form ES-301-1**

Facility: Vogtle 1 & 2 Date of Examination: 04/15/2013
Examination Level: RO SRO ☑ SROU ☑ Operating Test Number: 2013-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations (a)	R, M	V-NRC-JP-14915-HL18 **Evaluate Quadrant Power Tilt Ratio** **Description:** With data provided, candidate will perform 14915-1, Data Sheet 7, for QPTR monitoring, evaluate data, and take appropriate action. G2.1.7 (4.4 / 4.7)
Conduct of Operations (b)	R, M	V-NRC-JP-00012-HL18 **Evaluate On-Shift Manning Requirements for Conditions Provided** **Description:** Candidate will determine if the minimum on-shift staffing requirements are met and identify required actions any time minimum staffing requirements are not met. G2.1.5 (2.9* / 3.9)
Equipment Control (c)	R, N	V-NRC-JP-14825-HL18 **Evaluate Surveillance Test Data** **Description:** Candidate will evaluate quarterly valve test surveillance data, determine if the required acceptance criteria are met, and specify Technical Specification required actions. G2.2.12 (3.7 / 4.1)
Radiation Control (d)	R, D, P	V-NRC-JP-00930-HL18 **Proper RWP Implementation** **Description:** Candidate will determine proper protective clothing requirements, projected dose, and whether the RWP is appropriate for the job task. G2.3.7 (3.5 / 3.6)

Emergency Procedures/Plan (e)	R, D	V-NRC-JP-NMP-EP-112-HL18 **Determine Offsite Protective Action Recommendations** **Description:** The candidate will determine PARs for the given emergency and complete the PAR Worksheet. G2.4.44 (4.4)
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
* Type Codes & Criteria:	(C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1; randomly selected)	

NRC SRO Admin Job Performance Measure "a"

Facility: Vogtle

Task No: V-LO-TA-17007

Task Title: Evaluate Quadrant Power Tilt Ratio

JPM No: V-NRC-JP-14915-HL18

K/A Reference: G2.1.7 RO 4.4 SRO 4.7

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

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

Initial Conditions: **Unit 1 is at 100% RTP.**

You just started your 12-hour shift.

Annunciator ALB10-E06, RADIAL TILT, is lit.

I&C reports that the Quadrant Power Tilt Monitor alarm is inoperable.

Initiating Cue: **The Shift Supervisor has directed you to, "Perform 14915-1, 'Special Conditions Surveillance Logs', for QPTR Monitoring, including the completion of Section 7.0, Evaluation and Review, using the following provided data".**

NI Channel	Detector	Current
1NI-41	A	409 mA
1NI-42	A	380 mA
1NI-43	A	450 mA
1NI-44	A	415 mA
1NI-41	B	435 mA
1NI-42	B	395 mA
1NI-43	B	460 mA
1NI-44	B	425 mA

Based on the results of the surveillance, is any Technical Specification LCO NOT met?

If any Technical Specification LCO is NOT met, THEN determine all Technical Specification REQUIRED ACTIONS to be performed during your shift, if any, for the given plant conditions.

Task Standard:	QPTR calculation per 14915-1, Data Sheet 7, performed correctly and evaluated for Tech Spec applicable actions.
Required Materials:	14915-1, "Special Condition Surveillance Logs" Unit 1 Plant Technical Data Book, Tab 5.0 (rev. 150) Tech Specs and Tech Spec Bases Calculator Red Ink Pen, if requested
General References:	None
Time Critical Task:	No
Validation Time:	16 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

DATA SHEET 7 Sheet 1 of 2

QUADRANT POWER TILT RATIO

NOTES

- The arrangement of the NI rack layout is Channel I, II, IV, and III.
- If ALB 10 D02 or E02 annunciate and power is less than 50% performance of this data sheet is not required.
- If ALB 10 E06 annunciates and power is less than 10% performance of this data sheet is not required.
- Prior to taking readings from the upper and lower detector meters, change scales on the RANGE MILLI-AMPS Switch and then return it to its original position. This will wipe the switch contacts giving a more accurate reading.

1. Calculate and record Quadrant Power Tilt Ratio at least once per 12 hours using Sheet 2. PC based spreadsheet may be used for QPTR calculation if normalization factors used are verified current with the PTDB Tab 5.0 revision. If performing a manual calculation, compare PTDB Tab 5.0 with the PC Spreadsheet (if the PC is available) to verify normalization factors.

CUE: If candidate requests TILT DEVIATION from engineering, "Perform procedure with the information provided".

Standard: Candidate reviews NOTES and step. PC Spreadsheet is not available.

Comment:

---

2. With one Power Range NI inoperable, obtain TILT DEVIATION from Reactor Engineering as determined from moveable incore detectors and verify it is within ±0.02 of QPTR obtained from the operable power range NIs. (Use avg and max of 3 operable NIs)

CUE: If candidate requests TILT DEVIATION from engineering, "Perform procedure with the information provided".

Standard: Candidate reviews step. No Power Range NI is inoperable.

Comment:

NOTE

A Fluke 8050A Digital Multimeter may be used to obtain more accurate current values for calculation of QPTR.

3. If a Fluke 8050A Digital Multimeter will be used to obtain current values from the NI Drawer, record instrument information below.

Instrument ID No._____

Cal Due Date_____

Standard: Candidate reviews step. A Multimeter will not be used.

Comment:

*** 4. Verify Quadrant Power Tilt Ratio is less than or equal to 1.02.**

Standard: Candidate verifies the calculated Quadrant Power Tilt Ratio value is 1.04 by correctly completing Sheet 2 of Data Sheet 7. NOTE: Rounding to three significant digits is not critical.

Comment:

---

* 5. **With Quadrant Power Tilt Ratio greater than 1.02, initiate action in accordance with Technical Specification LCO 3.2.4** and continue to calculate and record QPTR once every 12 hours on sheet 2.

The Technical Specification LCO 3.2.4 REQUIRED ACTION for QPTR > 1.02 is to limit THERMAL POWER to ≥ 3% below RTP for each 1% of QPTR > 1.00 within 2 hours. **With calculated QPTR = 1.04, a power reduction to at least 12% below RTP (88%) is required.**

NOTE TO EXAMINER: LCO 3.2.4 includes additional required actions to perform periodic manual QPTR calculations and to perform other surveillances after the thermal power reduction. These actions are NOT necessary to successfully complete the critical step, which is to "initiate action in accordance with Technical Specification LCO 3.2.4".

Standard: **Candidate determines power reduction to 12% below RTP (88%) is required.**

Comment:

Terminating cue: Candidate returns initiating cue sheet.

3.2 POWER DISTRIBUTION LIMITS

3.2.4 QUADRANT POWER TILT RATIO (QPTR)

LCO 3.2.4 The QPTR shall be ≤ 1.02.

APPLICABILITY: MODE 1 with THERMAL POWER > 50% RTP.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. ————NOTE———— Required Action A.6 must be completed whenever Required Action A.5 is implemented. ———————————— QPTR not within limit.	A.1	Limit THERMAL POWER to ≥ 3% below RTP for each 1% of QPTR > 1.00.	2 hours
	AND		
	A.2.1	Perform SR 3.2.4.1.	Once per 12 hours
	AND		
	A.2.2	Limit THERMAL POWER to ≥ 3% below RTP for each 1% QPTR > 1.00.	————NOTE———— For performances of Required Action A.2.2 the Completion Time is measured from the completion of SR 3.2.4.1. ———————————— 2 hours
	AND		
	A.3	Perform SR 3.2.1.1 and SR 3.2.2.1.	Within 24 hours after achieving equilibrium conditions with THERMAL POWER limited by Required Actions A.1 and A.2.2

(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)			AND Once per 7 days thereafter
	AND		
	A.4	Reevaluate safety analyses and confirm results remain valid for duration of operation under this condition.	Prior to increasing THERMAL POWER above the limit of Required Action A.1 and A.2.2
	AND		
	A.5	----------NOTE---------- Perform Required Action A.5 only after Required Action A.4 is completed. ----------	
		Calibrate excore detectors to show QPTR = 1.00.	Prior to increasing THERMAL POWER above the limit of Required Action A.1 and A.2.2
	AND		
			(continued)
A. (continued)	A.6	----------NOTE---------- Perform Required Action A.6 only after Required Action A.5 is completed. ----------	
		Perform SR 3.2.1.1 and SR 3.2.2.1.	----------NOTE---------- Only one of the following Completion Times, whichever becomes applicable first, must be met. ---------- Within 24 hours after reaching RTP OR Within 48 hours after increasing THERMAL POWER above the limit of Required Action A.1 and A.2.2

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)

DATA SHEET 7 Sheet 2 of 2

DATE _____

TIME _____

NI Channel	Detector	Current	Factor*	
41	A	409 mA	x 1.131	= **462.579** (1)
42	A	380 mA	x 1.129	= **429.020** (1)
43	A	450 mA	x 1.020	= **459.000** (1)
44	A	415 mA	x 1.103	= **457.745** (1)
			Avg =	**452.086** (1)

QPTR (Upper) = $\frac{\text{Max(upper)}}{\text{Avg(upper)}}$ = **1.02** (2)

NI Channel	Detector	Current	Factor*	
41	B	435 mA	x 1.077	= **468.495** (1)
42	B	395 mA	x 1.090	= **430.550** (1)
43	B	460 mA	x 1.000	= **460.000** (1)
44	B	425 mA	x 1.060	= **450.500** (1)
			Avg =	**452.386** (1)

QPTR (Lower) = $\frac{\text{Max(lower)}}{\text{Avg(lower)}}$ = **1.04** (2)

QPTR = Max of QPTR(upper) or QPTR(lower) = **1.04**

TILT DEVIATION = N/A
(from Reactor Engineering if applicable)

COMPLETED BY *Candidate*

Shift Supervisor Review: _____/_____/_____
Initial Date Time

*Factor = Normalization Factor from Plant Technical Data Book tab 5.0
Note 1 = Calculations should be performed to 3 decimal places
Note 2 = Round to 2 decimal places (if the 3rd decimal is ≥5 round up, if 3rd decimal is <5, round down)

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)

7.0 EVALUATION AND REVIEW

7.1 TEST PURPOSE

Special Condition(s):

Quadrant Power Tilt Monitor alarm is inoperable

Data Sheet(s) completed (Circle Appropriate Sheets):

1 2 3 4a 4b 5 6 7 8 9 10 11 12 13 14 15 16 17 18

7.2 Results obtained through the performance of this procedure meet the ACCEPTANCE CRITERIA of Section 6.0.

☐ YES ☒ NO

7.3 IF no was checked, immediately notify the SS and initiate action in accordance with the actions specified on the data sheet(s) not meeting the acceptance criteria.

7.4 Comments (include any abnormal conditions and corrective actions taken):

Lower QPTR exceeds 1.02

Test Completed and SS Notified: _____ _____ _____

Supervisory Review: _____ _____ _____

Signature Date Time

Verification of Completion

Job Performance Measure No: V-NRC-JP-14915-HL18

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: Unit 1 is at 100% RTP.

You just started your 12-hour shift.

Annunciator ALB10-E06, RADIAL TILT, is lit.

I&C reports that the Quadrant Power Tilt Monitor alarm is inoperable.

Initiating Cue: The Shift Supervisor has directed you to, "Perform 14915-1, 'Special Conditions Surveillance Logs', for QPTR Monitoring, including the completion of Section 7.0, Evaluation and Review, using the following provided data.

NI Channel	Detector	Current
1NI-41	A	409 mA
1NI-42	A	380 mA
1NI-43	A	450 mA
1NI-44	A	415 mA
1NI-41	B	435 mA
1NI-42	B	395 mA
1NI-43	B	460 mA
1NI-44	B	425 mA

Based on the results of the surveillance, is any Technical Specification LCO NOT met?

If any Technical Specification LCO is NOT met, THEN determine all Technical Specification REQUIRED ACTIONS to be performed during your shift, if any, for the given plant conditions.

NRC SRO Admin Job Performance Measure "b"

Facility: Vogtle

Task No: N/A

Task Title: Evaluate On-Shift Manning Requirements for Conditions Provided

JPM No: V-NRC-JP-00012-HL18

K/A Reference: G2.1.5 RO 2.9* SRO 3.9

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

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

Initial Conditions: **Both Units are at 100% power.**

It is night shift on a holiday, and maximum off-time has been encouraged by Operations Management.

The SAT Operator and the Wilson Operator are not required to be manned.

All required Security positions are manned.

The table below represents the Operations personnel who have arrived to receive turnover and their qualification status.

OPERATORS	LICENSE STATUS / QUALIFICATIONS
Bill	SRO V-OPS-SS, V-ERO-CR01, V-ERO-CR10, V-OPS-STA
Stephen Amy	SRO V-OPS-USS, V-ERO-CR02, V-ERO-CR10, V-OPS-STA, V-FP-FIRE BRIGADE LEADER
Matt	SRO V-OPS-STA, V-FP-FIRE BRIGADE LEADER
Kevin Britt Jayme Rodney	RO V-OPS-RO/BOP, V-ERO-CR04
Neal Robert Ray Elizabeth Terry Jeff	NLO V-OPS-SO, V-FP-FIRE BRIGADE

Initiating Cue: **Using 00012-C, "Shift Manning Requirements", and the operations crew shown in the table provided, give a written response to the following questions:**

1) **Does the crew shown in the table provided satisfy the Minimum Shift Manning requirements of 00012-C, Data Sheet 1? (NOTE: Only consider the operations crew members and not the Emergency Plan Section of Data Sheet 1.)**

2) **Based on the crew shown in the table provided and 00012-C, can "Elizabeth" simultaneously fill the positions on Data Sheet 1 of Unit #2 SO and Fire Brigade Member?**

3) **If, at any time, the operating crew minimum shift manning requirements are NOT meet, what Technical Specification action, if any, must be taken?**

_____

_____

_____

_____

Task Standard:	Upon successful completion of this JPM, the examinee will correctly: 1. Determine if the minimum shift manning requirements of 00012-C, "Shift Manning Requirements", are met. 2. Determine if an operator can simultaneously fill two required shift positions on Data Sheet 1 of 00012-C. 3. State the Technical Specification action that must be taken if minimum shift manning requirements are not met.
Required Materials:	00012-C, "Shift Manning Requirements" Technical Specifications
General References:	None
Time Critical Task:	No
Validation Time:	14 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

*** 1. Determine if the minimum shift manning requirements of 00012-C, "Shift Manning Requirements", are met.**

Data Sheet 1 of 00012-C and available operations personnel table are reviewed to determine if minimum shift manning requirements are met.

NOTE TO EXAMINER: Completion of Data Sheet 1 is NOT required to meet the critical step. The following is an example provided to aid debrief discussions with the candidate, if required. Name/position combinations may vary.

Approved By J. B. Stanley	Vogtle Electric Generating Plant	Procedure Number Rev 00012-C 17.2
Date Approved 03/17/2009	SHIFT MANNING REQUIREMENTS	Page Number 5 of 6

DATA SHEET 1 Sheet 1 of 2

Minimum Shift Manning (Either Unit in Mode 1-4)

Date: _____ **Shift (Day/Night):** _____

POSITION	UNIT #1	COMMON	UNIT #2
Shift Manager V-OPS-SS, V-ERO-CR01, and V-ERO-CR10		Bill Also assigned as Emergency Director	
SS V-OPS-USS, V-ERO-CR02, AND V-ERO-CR10	Stephen Also assigned as ENS Communicator		Amy Also assigned as ENS Communicator
OATC V-OPS-RO/BOP	Kevin		Britt
UO V-OPS-RO/BOP and V-ERO-CR04	Jayme Also assigned as ENN Communicator		Rodney Also assigned as ENN Communicator
SO V-OPS-SO	Terry SO/NPO		Jeff SO/NPO
STA (May be assigned other duties) V-OPS-STA		Bill (SM, or SSS or SS not assigned to FB or ENN Communicator)	
Fire Team Captain V-FP-FIRE BRIGADE LEADER		Matt SSS, or SS C&T	
FB Member V-FP-FIRE BRIGADE		1. Neal SO(Also fulfills Common SO FSAR req)	
FB Member V-FP-FIRE BRIGADE		2. Robert SO	
FB Member V-FP-FIRE BRIGADE		3. Ray SO	
FB Member V-FP-FIRE BRIGADE		4. Elizabeth SO	
Security V-ERO-SEC or V-ERO-SEC02		Joe Per Security Procedure 90101-C	
SAT Operator V-OPS-SO-OAO	Assigned per procedure 13419-C	5. N/A SO/NPO/SRO	
Wilson Operator V-OPS-WILSON BLKSTRT	Assigned per procedure 13419-C	6. N/A SO/NPO	

Cue: ***If asked about the SAT Operator, Wilson Operator, or Security, "See initial conditions".***

Standard: **Candidate determines minimum shift manning requirements of 00012-C, "Shift Manning Requirements", ARE met.**

Comment:

*** 2. Determine if an operator can simultaneously fill two required shift positions on Data Sheet 1 of 00012-C.**

Data Sheet 1 of 00012-C is reviewed to determine if a qualified NLO can simultaneously fill the Unit #2 SO and Fire Brigade Member positions.

A note at the bottom of Data Sheet 1 reads, "1. Personnel may NOT be assigned to more than one position unless specifically noted next to the position label". There is no allowance for either of these two positions to fill other positions simultaneously.

SO V-OPS-SO	Terry SO/NPO		Jeff SO/NPO
STA (May be assigned other duties) V-OPS-STA		Bill (SM, or SSS or SS not assigned to FB or ENN Communicator)	
Fire Team Captain V-FP-FIRE BRIGADE LEADER		Matt SSS, or SS C&T	
FB Member V-FP-FIRE BRIGADE		1. Neal SO(Also fulfills Common SO FSAR req)	
FB Member V-FP-FIRE BRIGADE		2. Robert SO	
FB Member V-FP-FIRE BRIGADE		3. Ray SO	
FB Member V-FP-FIRE BRIGADE		4. Elizabeth SO	

1. Personnel may NOT be assigned to more than one position unless specifically noted next to the position label.

Standard: **Candidate determines that the operator can NOT simultaneously fill the two required shift positions.**

Comment:

*** 3. State the Technical Specification action that must be taken if minimum shift manning requirements are not met.**

Technical Specification 5.2.2.c is reviewed to determine required actions to be taken if minimum shift manning requirements are not met. A NOTE in 00012-C prior to Step 4.4 states:

> "The shift crew composition may be less than the minimum requirement of 10CFR50.54 (m)(2)(i) and Tech. Spec. 5.2.2.a and g. for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements".

NOTE TO EXAMINER: This is the same wording as Technical Specification 5.2.2.c.

Standard: **Candidate states that immediate action is taken to ensure the minimum shift manning requirements are met within two hours.**

Comment:

Terminating cue: Candidate returns initiating cue sheet.

(ANSWER KEY – DO NOT PROVIDE TO CANDIDATES)

1) **Does the crew shown in the table provided satisfy the Minimum Shift Manning requirements of 00012-C, Data Sheet 1? (NOTE: Only consider the operations crew members and not the Emergency Plan Section of Data Sheet 1.)**

YES

2) **Based on the crew shown in the table provided and 00012-C, can "Elizabeth" simultaneously fill the positions on Data Sheet 1 of Unit #2 SO and Fire Brigade Member?**

NO

3) **If, at any time, the operating crew minimum shift manning requirements are NOT met, what Technical Specification action, if any, must be taken?**

Take immediate action to ensure the minimum shift manning requirements are met within two hours.

NOTE TO EXAMINER: Similar wording is acceptable if based on the NOTE in 00012-C:

> **"The shift crew composition may be less than the minimum requirement of 10CFR50.54 (m)(2)(i) and Tech. Spec. 5.2.2.a and g. for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements".**

Verification of Completion

Job Performance Measure No: V-NRC-JP-00012-HL18

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: **Both Units are at 100% power.**

It is night shift on a holiday, and maximum off-time has been encouraged by Operations Management.

The SAT Operator and the Wilson Operator are not required to be manned.

All required Security positions are manned.

The table below represents the Operations personnel who have arrived to receive turnover and their qualification status.

OPERATORS	LICENSE STATUS / QUALIFICATIONS
Bill	SRO V-OPS-SS, V-ERO-CR01, V-ERO-CR10, V-OPS-STA
Stephen Amy	SRO V-OPS-USS, V-ERO-CR02, V-ERO-CR10, V-OPS-STA, V-FP-FIRE BRIGADE LEADER
Matt	SRO V-OPS-STA, V-FP-FIRE BRIGADE LEADER
Kevin Britt Jayme Rodney	RO V-OPS-RO/BOP, V-ERO-CR04
Neal Robert Ray Elizabeth Terry Jeff	NLO V-OPS-SO, V-FP-FIRE BRIGADE

Initiating Cue: **Using 00012-C, "Shift Manning Requirements", and the operations crew shown in the table provided, give a written response to the following questions:**

1) **Does the crew shown in the table provided satisfy the Minimum Shift Manning requirements of 00012-C, Data Sheet 1? (NOTE: Only consider the operations crew members and not the Emergency Plan Section of Data Sheet 1.)**

2) **Based on the crew shown in the table provided and 00012-C, can "Elizabeth" simultaneously fill the positions on Data Sheet 1 of Unit #2 SO and Fire Brigade Member?**

3) **If, at any time, the operating crew minimum shift manning requirements are NOT met, what Technical Specification action, if any, must be taken?**

_____

_____

_____

_____

NRC SRO Admin Job Performance Measure "c"

Facility: Vogtle

Task No: N/A

Task Title: Evaluate Surveillance Test Data

JPM No: V-NRC-JP-14825-HL18

K/A Reference: G2.2.12 RO 3.7 SRO 4.1

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

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

PART 1

Initial Conditions: **Unit 1 is at 100% RTP.**

14825-1, "Quarterly Inservice Valve Test", is being performed on the following Train A Atmospheric Relief Valves (ARVs):

1-PV-3000
1-PV-3030

Initiating Cue: **The Shift Supervisor has directed you to, "Perform Steps 4.5 and 4.6 of 14825-1 and record the Reference Stroke Times and the High and Low Acceptance Criteria Limits on the provided Data Sheet 12".**

PART 2
(PROVIDE WHEN CANDIDATE COMPLETES PART 1)

Initial Conditions: Unit 1 is at 100% RTP.

14825-1, "Quarterly Inservice Valve Test", for the following Train A Atmospheric Relief Valves (ARVs) is complete:

1-PV-3000
1-PV-3030

The results of the surveillance tests are as follows:

Valve Number	Exercise (EXER) Test	Iso Valve Stroke Test	Position Indication Test	Fail Safe Test	Actual Stroke Open Time	Actual Stroke Closed Time
1-PV-3000	Sat	Sat	Sat	Unsat	21.7 sec.	23.6 sec.
1-PV-3030	Sat	Sat	Unsat	Sat	25.9 sec.	27.2 sec.

Initiating Cue: The Shift Supervisor has directed you to, "Complete Data Sheet 12 of 14825-1 using the data provided and determine if the Acceptance Criteria of Section 6.0 are met".

Based on your evaluation and review of the surveillance test results:

Is 1-PV-3000 operable?

Is 1-PV-3030 operable?

IF any Technical Specification LCO is NOT met, THEN determine all Technical Specification REQUIRED ACTIONS.

Task Standard:	14825-1, Data Sheet 12, completed correctly and ARV operability determined.
Required Materials:	14825-1, "Quarterly Inservice Valve Test" (pages 1-7, 75-97, and 129 of marked up version) 14825-1, Data Sheet 12 (partially completed for candidate use) Unit 1 In-Service Test (IST) Data Book Calculator Red Ink Pen, if requested
General References:	None
Time Critical Task:	No
Validation Time:	18 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

BEGIN PART 1

*** 4.5 Record the Reference Stroke Time [obtained from the In-Service Test (IST) Data Book] for the valve(s) to be tested.**

DATA SHEET 12 - MAIN STEAM SYSTEM
TECHNICAL SPECIFICATIONS APPLICABILITY - MODES 1, 2, 3
(TEST SECTION 5.3.12)

TEST PURPOSE:

☒ Surveillance
☐ Maintenance Retest-MWO#_____
☐ Other _____

VALVE(TRAIN) DESCRIPTION	VALVE TYPE	VALVE TEST DATE	INIT POST	SAFETY POS	EXER TEST	ISO VALVE STROKE	POS IND TEST	REF STROKE TIME
*1-PV-3000 SG-1 ARV (A)	EHV		O (C)	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O 19.9 C 20.5
*1-PV-3010 SG-2 ARV (B)	EHV	N/A	O C	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O C
*1-PV-3020 SG-3 ARV (B)	EHV	N/A	O C	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O C
*1-PV-3030 SG-4 ARV (A)	EHV		O (C)	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O 21.2 C 21.9

NOTE TO EXAMINER: There is no allowable error in the candidate's Reference Stroke Time data since it taken directly from the IST Data Book.

Standard: Candidate correctly completes REF STROKE TIME column.

Comment:

NOTES prior to Step 4.6

NOTES

- The method used to determine valve tolerance factor is per the following table. The tolerance factor is dependent on the valve Reference-Stroke Time and actuator type [i.e., Motor Operated Valves (MOVs) versus all other types of Power Operated Valves (POVs)]. Also, valves with reference-stroke times of less than two (2) seconds may be exempted from applying a tolerance factor IF maximum allowable stroke time is set at 2 seconds.

Reference Stroke Time	Tolerance	Low Limit Correction Factor	High Limit Corr Factor
POVs: ≤10 sec	±50%	0.50	1.50
>10 sec	±25%	0.75	1.25
MOVs: ≤10 sec	±25% OR ±1 sec*	0.75 OR -1 sec*	1.25 OR +1 sec*
>10 sec	±15%	0.85	1.15

*Whichever Is Greater

- IF High Acceptance Time Limit is greater than Max Stroke Time, record Max Stroke Time as High Acceptance Time Limit.

NOTE TO EXAMINER: Candidate will refer to the POV line (>10 sec.) in the table to determine allowable tolerance factor. The ARV valve type is an EHV.

Standard: Candidate reviews NOTES to determine correct tolerance factor.

Comment:

*** 4.6.** **Calculate <u>AND</u> record, on applicable data sheet, Acceptance Criteria Limits for the respective valves using the Reference Stroke Time multiplied by the tolerance factor or record limits from the In Service Test (IST) Data Book.**

DATA SHEET 12 - MAIN STEAM SYSTEM
TECHNICAL SPECIFICATIONS APPLICABILITY - MODES 1, 2, 3
(TEST SECTION 5.3.12)

TEST PURPOSE:

☒ Surveillance
☐ Maintenance Retest-MWO#_____
☐ Other _____

VALVE(TRAIN) DESCRIPTION	VALVE TYPE	VALVE TEST DATE	INIT POST	SAFETY POS	EXER TEST	ISO VALVE STROKE	POS IND TEST	REF STROKE TIME	LOW LIMIT	HIGH LIMIT
*1-PV-3000 SG-1 ARV (A)	EHV		O (C)	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O 19.9 C 20.5	O 14.9 C 15.4	O 24.9 C 25.6
*1-PV-3010 SG-2 ARV (B)	EHV	N/A	O C	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O C	O C	O C
*1-PV-3020 SG-3 ARV (B)	EHV	N/A	O C	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O C	O C	O C
*1-PV-3030 SG-4 ARV (A)	EHV		O (C)	O/C	Sat Unsat	Sat Unsat	Sat Unsat	O 21.2 C 21.9	O 15.9 C 16.4	O 26.5 C 27.4

Standard: **Candidate correctly determines the Acceptance Criteria High and Low Limits from the IST Data Book and records on Data Sheet 12. NOTE: The candidate may re-calculate the limits to confirm the data, but is not required to do so.**

Comment:

<u>Candidate turns in Part 1 of JPM.</u>

NOTE TO EXAMINER: When candidate returns first cue sheet, give the candidate the second cue sheet.

BEGIN PART 2

*** Complete Data Sheet 12 of 14825-1 using the data provided.**

EXER TEST	ISO VALVE STROKE	POS IND TEST	REF STROKE TIME	LOW LIMIT	HIGH LIMIT	MAX STROKE TIME	** FAIL SAFE TEST	ACT RESV TEMP °F	ACTUAL STROKE TIME	STROKE TIME TEST
(Sat) Unsat	(Sat) Unsat	(Sat) Unsat	O 19.9 C 20.5	O 14.9 C 15.4	O 24.9 C 25.6	28	Sat (Unsat)	N/A	O 21.7 C 23.6	(Sat) Unsat
Sat Unsat	Sat Unsat	Sat Unsat	O C	O C	O C	28	Sat Unsat		O C	Sat Unsat
Sat Unsat	Sat Unsat	Sat Unsat	O C	O C	O C	28	Sat Unsat		O C	Sat Unsat
(Sat) Unsat	(Sat) Unsat	Sat (Unsat)	O 21.2 C 21.9	O 15.9 C 16.4	O 26.5 C 27.4	28	(Sat) Unsat	N/A	O 25.9 C 27.2	(Sat) Unsat

Standard: **Candidate correctly completes Data Sheet 12 using the data provided.**

Comment:

*** Determine if the Acceptance Criteria of Section 6.0 are met.**

6.2 The Exercise, Fail Safe AND Position Indication Verification Test results are recorded on the applicable data sheet as SAT indicating that each valve tested exercised satisfactorily, failed CLOSED on loss of power, AND the position indication corresponded to actual valve position (recorded in Step 5.2.3).

* See Test Section 5.3.12 prior to testing
** Not required for OPERABILITY.

Results obtained through performance of this procedure meet ACCEPTANCE CRITERIA of Section 6.0. ☐ YES ☒ NO

IF NO was checked, refer to Section 7.0, EVALUATION AND REVIEW.

Standard: Candidate determines that the Acceptance Criteria of Section 6.0 are NOT met based on UNSAT 1-PV-3000 Fail Safe Test and 1-PV-3030 Position Indication Test results.

Comment:

*** Determine if 1-PV-3000 is operable.**

Candidate recognizes that the ** in the FAIL SAFE TEST column means that this test is NOT required for operability.

NOTE TO EXAMINER: Candidate may also refer to the NOTE prior to Step 5.3.12.1, which states, "The Fail Safe Test is not required to satisfy OPERABILITY under the IST program. This test is performed every 12 months in conjunction with the local hand-pump station valve strokes and is tracked by that Task Sheet".

EXER TEST	ISO VALVE STROKE	POS IND TEST	REF STROKE TIME	LOW LIMIT	HIGH LIMIT	MAX STROKE TIME	** FAIL SAFE TEST	ACT RESV TEMP °F	ACTUAL STROKE TIME	STROKE TIME TEST
(Sat) Unsat	(Sat) Unsat	(Sat) Unsat	O 19.9 C 20.5	O 14.9 C 15.4	O 24.9 C 25.6	28	Sat (Unsat)	N/A	O 21.7 C 23.6	(Sat) Unsat
Sat Unsat	Sat Unsat	Sat Unsat	O C	O C	O C	28	Sat Unsat		O C	Sat Unsat
Sat Unsat	Sat Unsat	Sat Unsat	O C	O C	O C	28	Sat Unsat		O C	Sat Unsat
(Sat) Unsat	(Sat) Unsat	Sat (Unsat)	O 21.2 C 21.9	O 15.9 C 16.4	O 26.5 C 27.4	28	(Sat) Unsat	N/A	O 25.9 C 27.2	(Sat) Unsat

* See Test Section 5.3.12 prior to testing
** Not required for OPERABILITY.

Results obtained through performance of this procedure meet ACCEPTANCE CRITERIA of Section 6.0. ☐ YES ☒ NO

IF NO was checked, refer to Section 7.0, EVALUATION AND REVIEW.

Standard: Candidate determines that 1-PV-3000 is OPERABLE.

Comment:

*** Determine if 1-PV-3030 is operable.**

Candidate recognizes that the POS IND TEST is UNSAT. Step 7.0.c, Evaluation and Review, states, "IF in Applicable Mode AND valve exercised unsatisfactorily, did NOT fail CLOSED on loss of power, position indication did NOT correspond to actual valve position, OR maximum allowed stroke time was exceeded; corrective action should be initiated immediately. The valve SHALL be declared INOPERABLE at the time of discovery AND the ACTION statement of applicable Technical Specification(s) entered".

EXER TEST	ISO VALVE STROKE	POS IND TEST	REF STROKE TIME	LOW LIMIT	HIGH LIMIT	MAX STROKE TIME	** FAIL SAFE TEST	ACT RESV TEMP °F	ACTUAL STROKE TIME	STROKE TIME TEST
(Sat) Unsat	(Sat) Unsat	(Sat) Unsat	O 19.9 C 20.5	O 14.9 C 15.4	O 24.9 C 25.6	28	Sat (Unsat)	N/A	O 21.7 C 23.6	(Sat) Unsat
Sat	Sat	Sat	O	O	O	28	Sat		O	Sat
Unsat	Unsat	Unsat	C	C	C		Unsat		C	Unsat
Sat	Sat	Sat	O____	O____	O____	28	Sat		O____	Sat
Unsat	Unsat	Unsat	C	C	C		Unsat		C	Unsat
(Sat) Unsat	(Sat) Unsat	Sat (Unsat)	O 21.2 C 21.9	O 15.9 C 16.4	O 26.5 C 27.4	28	(Sat) Unsat	N/A	O 25.9 C 27.2	(Sat) Unsat

* See Test Section 5.3.12 prior to testing
** Not required for OPERABILITY.

Results obtained through performance of this procedure meet ACCEPTANCE CRITERIA of Section 6.0. ☐ YES ☒ NO

IF NO was checked, refer to Section 7.0, EVALUATION AND REVIEW.

Standard: Candidate determines that 1-PV-3030 is INOPERABLE.

Comment:

*** Determine if any Technical Specification LCO is not met.**

Candidate recognizes that 1-PV-3030 is the only INOPERABLE ARV and that Technical Specification LCO 3.7.4, "Atmospheric Relief Valves (ARVs)", is met. No action is required. The candidate may indicate an INFO LCO will be written, but this is not required for the critical step.

3.7 PLANT SYSTEMS

3.7.4 Atmospheric Relief Valves (ARVs)

LCO 3.7.4 Three ARV lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One required ARV line inoperable.	A.1	Restore required ARV line to OPERABLE status.	30 days
B. Two or more required ARV lines inoperable.	B.1	Restore at least two ARV lines to OPERABLE status.	24 hours
C. Required Action and associated Completion Time not met.	C.1	Be in MODE 3.	6 hours
	AND		
	C.2	Be in MODE 4	18 hours

Standard: **Candidate determines that Technical Specification LCO 3.7.4, "Atmospheric Relief Valves (ARVs)", is met.**

Comment:

Terminating cue: Candidate returns initiating cue sheet.

Verification of Completion

Job Performance Measure No: V-NRC-JP-14825-HL18

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: Unit 1 is at 100% RTP.

14825-1, "Quarterly Inservice Valve Test", is being performed on the following Train A Atmospheric Relief Valves (ARVs):

1-PV-3000
1-PV-3030

Initiating Cue: The Shift Supervisor has directed you to, "Perform Steps 4.5 and 4.6 of 14825-1 and record the Reference Stroke Times and the High and Low Acceptance Criteria Limits on the provided Data Sheet 12".

PART 2

Initial Conditions: Unit 1 is at 100% RTP.

14825-1, "Quarterly Inservice Valve Test", for the following Train A Atmospheric Relief Valves (ARVs) is complete:

1-PV-3000
1-PV-3030

The results of the surveillance tests are as follows:

Valve Number	Exercise (EXER) Test	Iso Valve Stroke Test	Position Indication Test	Fail Safe Test	Actual Stroke Open Time	Actual Stroke Closed Time
1-PV-3000	Sat	Sat	Sat	Unsat	21.7 sec.	23.6 sec.
1-PV-3030	Sat	Sat	Unsat	Sat	25.9 sec.	27.2 sec.

Initiating Cue: The Shift Supervisor has directed you to, "Complete Data Sheet 12 of 14825-1 using the data provided and determine if the Acceptance Criteria of Section 6.0 are met".

Based on your evaluation and review of the surveillance test results:

Is 1-PV-3000 operable?

Is 1-PV-3030 operable?

IF any Technical Specification LCO is NOT met, THEN determine all Technical Specification REQUIRED ACTIONS.

NRC RO / SRO Admin Job Performance Measure "d"

Facility: Vogtle

Task No: N/A

Task Title: Determine Minimum Protective Clothing Requirements and Total Projected Dose, and Determine if task can be completed without exceeding any Radiological Limits

JPM No: V-NRC-JP-00930-HL18

K/A Reference: G2.3.7 RO 3.5 SRO 3.6

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

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

Initial Conditions: **Unit 1 is at 100% power.**

You have been assigned to close and danger tag 1-1204-U4-111 in Unit 1 containment.

You have been briefed by HP on the limitations of RWP 13-0101.

HP has permitted the minimum protective clothing requirements stated in the RWP.

Your accumulated dose for this year to date is 960 mrem.

The TOTAL round-trip TRANSIT dose will be 6 mrem.

The TOTAL time at the job site will be 5 minutes.

Assume neutron dose exposure is negligible.

Initiating Cue: **Using RWP 13-0101 and the survey map of the Unit 1 containment work area, determine and document in the table below:**

a. **Your protective clothing requirements.**
b. **Your projected total gamma dose.**
c. **If you can or cannot perform the task without exceeding any limits. If not, then state the reason.**

Protective clothing requirements	
Projected total gamma dose	
Can you complete this task without exceeding any limits?	
REASON, if applicable	

Task Standard: Upon successful completion of this JPM, the examinee will correctly:
1. Identify the protective clothing requirements.
2. Calculate the projected total gamma dose.
3. Determine if the task can be performed without exceeding any limits, and if not, then state the reason.

Required Materials: Calculator
Containment survey map
RWP 13-0101

General References: NMP-HP-001, "Radiation Protection Standard Practices"
00930-C, "Radiation and Contamination Control"

Time Critical Task: No

Validation Time: 15 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

*** Determine protective clothing requirements.**

Refer to RWP 13-0101 "Protective Clothing Requirements", which states the minimum requirements for a "C" zone are booties, gloves, and a lab coat.

Cue: ***If asked if the dress requirements were changed per HP direction, "See initial conditions".***

Standard: **Correct protective clothing requirements determined.**

Comment:

*** Calculate projected total gamma dose.**

Using survey map, a dose rate of 84 mrem/hour at the valve is determined.

The tagging task will take 5 minutes.

84 mrem/hour (1 hour / 60 minutes) (5 minutes) = 7 mrem [no range on calculated value]

Transit dose of 6 mrem is added to calculated dose.

7 mrem + 6 mrem = 13 mrem [no range on calculated value]

Standard: **Projected total dose calculated to be 13 mrem [no range on final value].**

Comment:

*** Determine if the task can be performed without exceeding any limits**

From NMP-HP-001, the admin annual dose limit is 1000 mrem.

Total calculated annual dose would be 960 mrem + 13 mrem = 973 mrem (annual limit is not exceeded)

RWP 13-0101 task dose rate limit is 80 mrem/hour. Dose rate at valve is 84 mrem/hour on the survey map (task dose rate limit is exceeded).

RWP 13-0101 task dose limit is 15 mrem. Calculated dose received is 13 mrem (task dose limit is not exceeded)

NOTE TO EXAMINER: Examinee may indicate that 13 mrem exceeds the task dose limit since HP briefings require workers to notify HP when they reach 80% of their task dose limit (12 mrem for this task). This response is acceptable.

Standard: **Determination is made that the task can NOT be performed without exceeding a limit.**

Comment:

*** State the reason that the task was NOT permitted.**

Examinee identifies that the RWP task dose rate limit is exceeded (dose rate at valve is 84 mrem/hour with an RWP task dose rate limit of 80 mrem/hour)

NOTE TO EXAMINER: Examinee may indicate that 13 mrem exceeds the task dose limit since HP briefings require workers to notify HP when they reach 80% of their task dose limit (12 mrem for this task). This response is acceptable.

Standard: **Correct reason is provided for why the task can NOT be performed.**

Comment:

Terminating cue: Candidate returns initiating cue sheet.

KEY (DO NOT PROVIDE TO CANDIDATES)

Protective clothing requirements	*Booties* *Gloves* *Lab Coat*
Projected total gamma dose	*13 mrem*
Can you complete this task without exceeding any limits?	*NO*
REASON, if applicable	*RWP task dose rate limit of 80 mrem/hour is exceeded* NOTE: Examinee may indicate that 13 mrem exceeds the task dose limit since HP briefings require workers to notify HP when they reach 80% of their task dose limit (12 mrem for this task). This response is acceptable.

Verification of Completion

Job Performance Measure No: V-NRC-JP-00930-HL18

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

Initial Conditions: Unit 1 is at 100% power.

You have been assigned to close and danger tag 1-1204-U4-111 in Unit 1 containment.

You have been briefed by HP on the limitations of RWP 13-0101.

HP has permitted the minimum protective clothing requirements stated in the RWP.

Your accumulated dose for this year to date is 960 mrem.

The TOTAL round-trip TRANSIT dose will be 6 mrem.

The TOTAL time at the job site will be 5 minutes.

Assume neutron dose exposure is negligible.

Initiating Cue: Using RWP 13-0101 and the survey map of the Unit 1 containment work area, determine and document in the table below:

a. Your protective clothing requirements.
b. Your projected total gamma dose.
c. If you can or cannot perform the task without exceeding any limits. If not, then state the reason.

Protective clothing requirements	
Projected total gamma dose	
Can you complete this task without exceeding any limits?	
REASON, if applicable	

NRC SRO Admin Job Performance Measure "e"

Facility: Vogtle

Task No: V-LO-TA-40005

Task Title: Determine Offsite Protective Action Recommendations

JPM No: V-NRC-JP-NMP-EP-112-HL18

K/A Reference: G2.4.44 SRO 4.4

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:

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

THIS IS A TIME CRITICAL JPM

Initial Conditions: **A General Emergency has just been declared due to a loss of three fission product barriers.**

An uncontrolled release is in progress from a failed containment penetration.

The initial Dose Assessment projects site boundary doses of 0.85 REM TEDE and 5.2 REM Thyroid CDE.

Heavy rains have caused widespread flooding in the CSRA with several bridges in Burke County washed out and many roads impassable. Heavy rains are continuing.

Wind direction (10 meter, 15 min. avg.) is currently 330°.

Initiating Cue: **You are the Emergency Director and, based on the information given, "Determine the required Offsite Protective Action Recommendation(s) and document your recommendations on Attachment 5, Figure 1, of NMP-EP-112".**

Task Standard:	PAR 1 determined and recommendations documented on Attachment 5, Figure 1, of NMP-EP-112.
Required Materials:	NMP-EP-112, "Protective Action Recommendations"
General References:	None
Time Critical Task:	Yes
Validation Time:	15 minutes

Performance Information

Critical steps denoted with an asterisk and bolded.

BEGIN TIME CRITICAL PAR DETERMINATION: _____

NMP-EP-112, Attachment 1, "Action Checklist for PAR Development", selected.

Standard: Candidate initiates NMP-EP-112, Attachment 1.

Comment:

NOTE:	ONLY THE MUTUALLY AGREED UPON PROTECTIVE ACTIONS SPECIFIED BELOW SHOULD BE RECOMMENDED UNLESS THERE ARE OBVIOUS RELEVANT FACTORS (E.G., SEVERE NATURAL PHENOMENA LIKE HURRICANES) THAT PROBABLY WERE NOT ANTICIPATED WHEN THE PARS WERE DEVELOPED AND THAT WOULD MAKE THE STANDARD PAR RECOMMENDATIONS IMPRACTICAL OR OBVIOUSLY NON-CONSERVATIVE. IN SUCH EVENTS, THE ED SHOULD USE JUDGMENT AS APPROPRIATE.

Standard: Candidate reads NOTE.

Comment:

Step A. INITIAL ACTIONS

1. Precautions and Limitations are applicable in development of Protective Action Recommendations (PARs) in subsequent steps. Attachment 5, Figure 1, "PAR WORKSHEET", may be used to record affected zones or sectors.

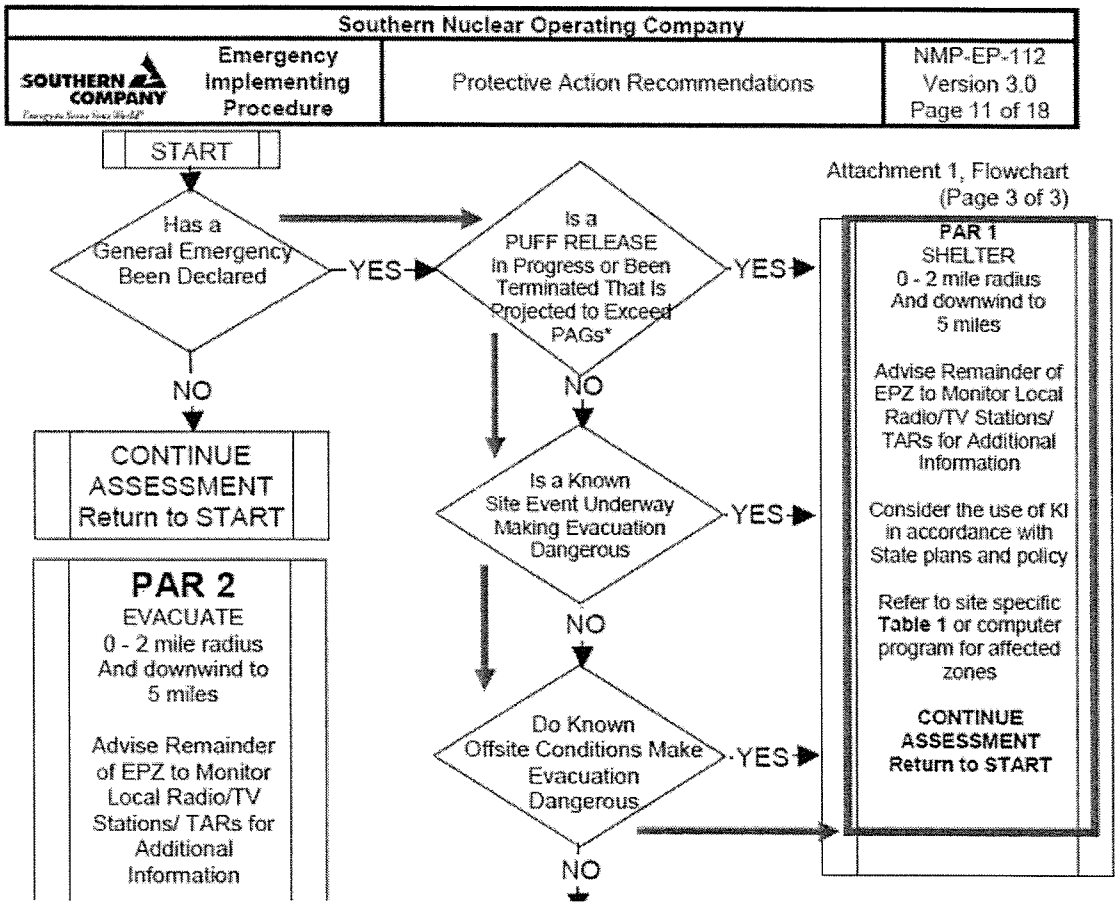
Standard: Candidate reviews precautions and limitations and uses Attachment 5, Figure 1, to document results per ED direction of initiating cue.

Comment:

*** Step A.** **INITIAL ACTIONS**

***2. Determine General Emergency PARs using Attachment 1 Flowchart.**

Standard: **Candidate uses flow chart and determines PAR 1.**



Comment:

CAUTION - PAR Revisions must include previous PARs

Standard: Candidate reads CAUTION. It does not apply since this is the initial PAR.

Comment:

*** Step A.** **INITIAL ACTIONS**

***3. For PAR 1, 2, and 3, determine the affected zones using Site specific Table 1. An electronic program may also be used.**

Standard: **Candidate selects Attachment 4, Table 1, to determine affected zones.**

Selects >326 to 349 row.

Selects PAR 1 and 2 column.

Selects A, B5, SRS to 2 miles

Comment:

NOTE: Once conditions requiring a PAR change are available, PARs should be developed as soon as possible. (The expectation for development is 15 minutes after the change in conditions.)

Standard: Candidate reads NOTE.

Comment:

*** Step A.** **INITIAL ACTIONS**

***4. Communicate developed PARs to the ED for review and approval.**

Standard: **Candidate completes Attachment 5, Figure 1. Since candidate is the Emergency Director, the Worksheet is to be signed. See Key on next page.**

PAR 1 box checked.
Wind Direction from 330° entered.
ENN line 5 (C) – A, B5, SRS to 2 Miles entered.
Emergency Director approval signed.

END TIME CRITICAL PAR DETERMINATION: _____

Comment:

Terminating cue: Candidate returns cue sheet and Attachment 5, Figure 1.

KEY (DO NOT PROVIDE TO CANDIDATES)

Attachment 5
Figure 1

PAR WORKSHEET

INSTRUCTIONS:

1. Check the box for the applicable PAR (1, 2, 3, or 4).
2. Record the 15 minute average "wind direction from" for the selected PAR.

   Use met instrumentation corresponding to primary release point(s) (BWR) OR ground level release (PWR).
3. Use the applicable "Site Specific" PAR table (Table 1 or 2) to determine the affected zones.

CAUTION:	PAR Revisions must include previous PARs.

On the ENN Form for the selected PAR:

- Select block 5.B and record the "Evacuate" zones OR select block 5.C and record the "Shelter" zones"
- Select block 5.D
- IF PAR 4 is selected, THEN additionally select block 5.E "Other" and provide "Affected Sectors" and "To Miles"

☒ PAR 1	**Wind direction from**	**330°**
	ENN Line 5 [C] Shelter Zones	**A, B5, SRS to 2 Miles**
	ENN Line 5 [D]	Advise remainder of EPZ to Monitor Local Radio/TV Stations /Tone Alert Radios. Consider the use of KI (Potassium Iodide) in accordance with State Plans and Policy

☐ PAR 2	**Wind direction from**	
	ENN Line 5 [B] Evacuate Zones	
	ENN Line 5 [D]	Advise remainder of EPZ to Monitor Local Radio/TV Stations /Tone Alert Radios. Consider the use of KI (Potassium Iodide) in accordance with State Plans and Policy

☐ PAR 3	**Wind direction from**	
	ENN Line 5 [B] Evacuate Zones	
	ENN Line 5 [D]	Advise remainder of EPZ to Monitor Local Radio/TV Stations /Tone Alert Radios. Consider the use of KI (Potassium Iodide) in accordance with State Plans and Policy

☐ PAR 4	**Wind direction from**	
	ENN Line 5 [B] Evacuate Zones	
	ENN Line 5 [D]	Advise remainder of EPZ to Monitor Local Radio/TV Stations/ Tone Alert Radios. Consider the use of KI (Potassium Iodide) in accordance with State Plans and Policy
	ENN Line 5 [E] OTHER	Evacuate Affected Sectors _____ to _____miles

Approval: _____ *Candidate _____ **Emergency Director**

today / now **Date/Time**

Verification of Completion

Job Performance Measure No: V-NRC-JP-NMP-EP-112-HL18

Examinee's Name:

Examiner's Name:

Date Performed:

Number of Attempts:

Time to Complete:

Question Documentation:

Question: _____
_____
_____

Response: _____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

THIS IS A TIME CRITICAL JPM

Initial Conditions: A General Emergency has just been declared due to a loss of all three fission product barriers.

An uncontrolled release is in progress from a failed containment penetration.

The initial Dose Assessment projects site boundary doses of 0.85 REM TEDE and 5.2 REM Thyroid CDE.

Heavy rains have caused widespread flooding in the CSRA area with several bridges in Burke County washed out and many roads impassable. Heavy rains are continuing.

Wind direction (10 meter, 15 min. avg.) is currently 330°.

Initiating Cue: You are the Emergency Director and, based on the information given, "Determine the required Offsite Protective Action Recommendation(s) and document your recommendations on Attachment 5, Figure 1, of NMP-EP-112".