OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK

SYSTEM: Residual Heat Removal

TASK: RHR System Piping and Flow Path Verification

TASK NUMBER:

JPM NUMBER: [ROA.1.1]

ALTERNATE PATH: [ ]

K/A NUMBER: 2.1.31

IMPORTANCE FACTOR: 4.2 (RO) ____ (SRO)

APPLICABILITY:

EO [ ] **RO** [X] **STA** [ ] **SRO** [ ]

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-ST.BC-0001, Rev. 11

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: (7) Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

CAUTION: **No plant equipment shall be operated during the performance of a JPM without the following:**

1. **Permission from the OS or Unit CRS;**
2. **Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).**
3. **Verification of the "as left" condition by a qualified individual.**

ACTUAL JPM COMPLETION TIME: _____ Minutes

ACTUAL TIME CRITICAL COMPLETION: N/A

JPM PERFORMED BY: _____ **GRADE:** [ ] **SAT** [ ] **UNSAT**

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____ **DATE:** _____

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Residual Heat Removal

TASK: Conduct A Retest As Specified In The Retest Package

TASK NUMBER: 2990580301

INITIAL CONDITIONS:

1. Fill and vent of RHR System Loop B has been complete in accordance with HC.OP-ST.BC-0001.
2. No other testing or maintenance is in progress at this time.

INITIATING CUE:

Perform the RHR System Piping and Flow Path Verification for RHR System Loop B in accordance with HC.OP-ST.BC-0001 (Provided).

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Residual Heat Removal
TASK: Conduct A Retest As Specified In The Retest Package

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations. **Examiner Cue: If excessive time is taken to review precautions and limitations, inform operator that all are satisfied.** **Examiner Note:** Initialling step completion in the body of the procedure is not critical.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step of procedure to be 5.3.		
		START TIME:_____			
	5.3.1	IF this is the first subsection of this procedure to be performed, THEN **LOG** test start time in the Control Room log(s).	Operator determines that this is NOT the first subsection of this procedure to be performed and initials the substep.		
	5.3.2	**ENSURE** all prerequisites of Section 2.2 are satisfied.	Operator ensures that all prerequisites of Section 2.2 are satisfied, completes Section 3.0 of Attachment 1, and initials each prerequisite and this substep.		
	5.3.3	**ENSURE** Section 1.0 of Attachment 1 has been completed AND Regular Surveillance OR Retest is indicated.	Operator ensures that Section 1.0 of Attachment 1 has been completed and Retest is indicated.		

NAME: _____
DATE: _____

SYSTEM: Residual Heat Removal
TASK: Conduct A Retest As Specified In The Retest Package

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.3.4	**GO TO** Subsection 5.4.	Operator initials and moves to Subsection 5.4.		
*	5.4.2	IF flow path verification for RHR System Loop B is required, THEN **REFER TO** Attachment 3 AND **PERFORM** the following: **[CD-408A, TS 4.6.2.2.a, T/S 4.6.2.3.a, TS 4.5.1.a.1.b]** A. **VERIFY** the valves listed in Section 1.0, are in their proper position as indicated on Panel 10C650.	Operator verifies the valves listed in Section 1.0 of Attachment 3 are in their proper position as indicated on Panel 10C650.		
*		B. **INDICATE** condition/performance.	Operator indicates on Attachment 3: • The position of each of the valves checked in the ACTUAL block • Determines that each position is satisfactory and notes SAT in the SAT/UNSAT block • Initials the PERF block. **Examiner Note:** Initialing the PERF block is not critical.		

NAME: _____
DATE: _____

SYSTEM: Residual Heat Removal
TASK: Conduct A Retest As Specified In The Retest Package

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.4.5	IF this is the final subsection of the procedure to be performed, THEN **PERFORM** the following: A. **LOG** test end time in the Control Room log(s).	Operator determines that this is the final subsection of the procedure to be performed and requests that the completion be logged in the Control Room log. **Examiner Cue: The test end time is logged in the Control Room log.**		
		B. **SUBMIT** the procedure to the OS/CRS for review AND completion of Attachment 1.	Operator submits the procedure to the OS/CRS for review and completion of Attachment 1.		
		STOP TIME:_____			

Terminating Cue: Repeat back message from the operator on the status of the JPM, and then state "This JPM is complete"

Initialize the Simulator in an IC that has RHR Loop B in its normal lineup.

Note Operating Condition, Reactor Power Level, and GMWE on Attachment 1.

INITIAL CONDITIONS:

1. **Fill and vent of RHR System Loop B has been complete in accordance with HC.OP-ST.BC-0001.**
2. **No other testing or maintenance is in progress at this time.**

INITIATING CUE:

Perform the RHR System Piping and Flow Path Verification for RHR System Loop B in accordance with HC.OP-ST.BC-0001 (Provided).

Facility: HOPE CREEK Date of Examination: _____

Examination Level: ☒ RO ☐ SRO Operating Test Number: _____

TOPIC: A.1-2 QUESTION: 1

Subject Description: Plant Parameter Verification

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

DESCRIPTION: Question-Given plant conditions, determine the maximum Suppression Pool Temperature that ensures NPSH is maintained.

QUESTION:

Given the following:

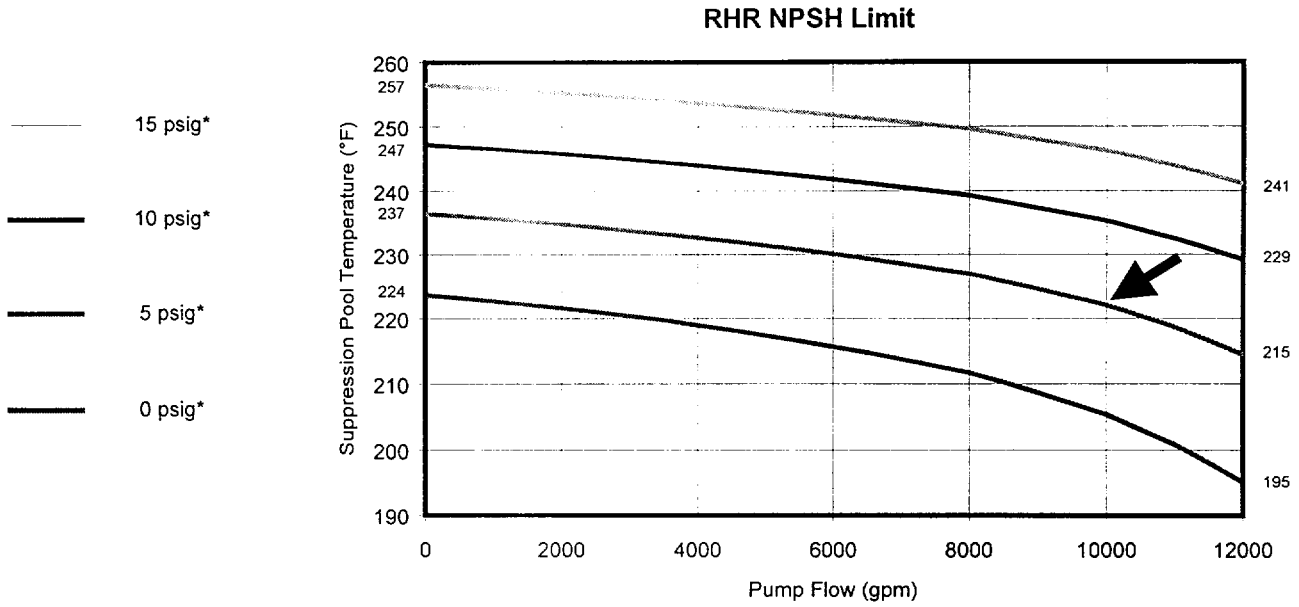
The reactor has scrammed (all control rods are at positon 00) on high drywell pressure. Plant conditions are as follows:

- Reactor Pressure 50 psig
- Reactor Level -50 inches rising slowly
- Suppression Pool Level 0 inches
- Suppression Pool Temperature 200F rising slowly
- Suppression Chamber Pressure 5 psig
- Drywell Temperature 240F rising slowly
- Drywell Pressure 5 psig
- B RHR is in Torus Cooling 10000 gpm

What is the maximum Suppression Pool Temperature that ensures NPSH is maintained for the B RHR PUMP (BP202)?

ANSWER: Reference EOP CAUTION 2

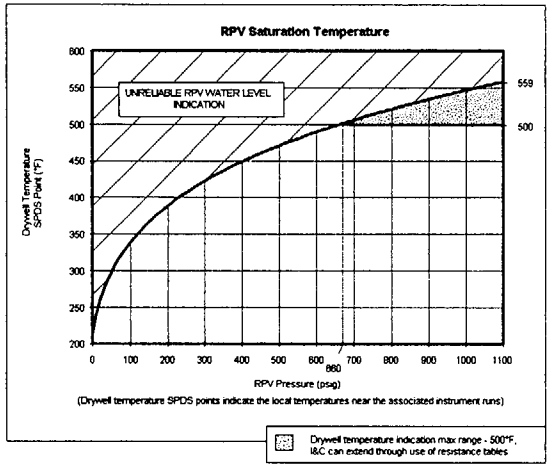
223F (±2)


RHR NPSH Limit
15 psig*
10 psig*
5 psig*
0 psig*
Suppression Pool Temperature (°F)
260
257
250
247
240
237
230
224
220
210
200
190
241
229
215
195
0
2000
4000
6000
8000
10000
12000
Pump Flow (gpm)

EOP CAUTION 1

A. Under conditions of elevated drywell temperature, channels A and B of the wide, narrow and upset RPV water level instruments provide the most reliable indications

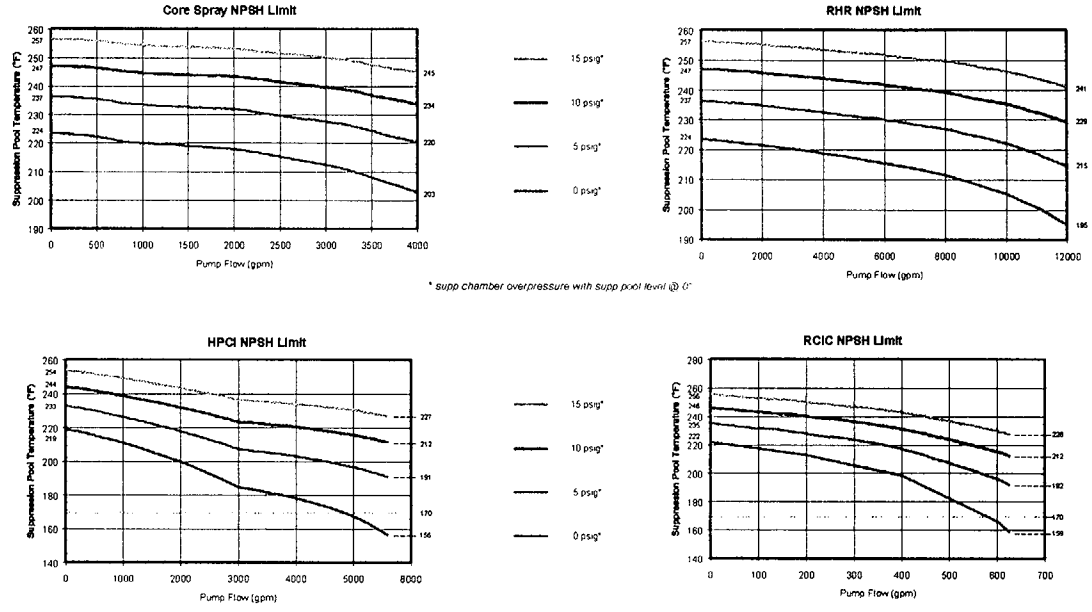
B. If any drywell temperature SPDS point exceeds the RPV saturation temperature, the associated level instruments may be unreliable



Drywell Temperature SPDS Points	Associated RPV Water Level Instruments
A2268	• LR-R623A-B21 Wide Range A (-150 to +60 in.) • LR-3883A Narrow Range A (0 to +60 in.) • LR-3883B Narrow Range B (0 to +60 in.) • LR-P615-B21 Fuel Zone A (-311 to -111 in.)
A2274	• LR-R623A-B21 Wide Range A (-150 to +60 in.) • LR-3883A Narrow Range A (0 to +60 in.) • LR-P615-B21 Fuel Zone A (-311 to -111 in.)
A2277	• LR-R623B-B21 Wide Range B (-150 to +60 in.) • LR-3883B Narrow Range B (0 to +60 in.) • LI-R610-B21 Fuel Zone B (-311 to -111 in.)
A2280	• LR-P615-B21 Fuel Zone A (-311 to -111 in.)
A2281	• LI-R610-B21 Fuel Zone B (-311 to -111 in.)
A2283	• LR-R623A-B21 Wide Range A (-150 to +60 in.) • LR-R623B-B21 Wide Range B (-150 to +60 in.) • LR-3883A Narrow Range A (0 to +60 in.) • LR-P615-B21 Fuel Zone A (-311 to -111 in.)
A2284	• LR-R623B-B21 Wide Range B (-150 to +60 in.) • LR-3883B Narrow Range B (0 to +60 in.) • LI-R610-B21 Fuel Zone B (-311 to -111 in.)
A2287	• LI-R610-B21 Fuel Zone B (-311 to -111 in.)

EOP CAUTION 1	
HOPE CREEK GENERATING STATION	
REV. 01	REV DATE 5/21/99

EOP CAUTION 2



* supp chamber overpressure with supp pool level @ 0'

* supp chamber overpressure with supp pool level @ 0'

TRAINING ONLY

Given the following:

The reactor has scrammed (all control rods are at positon 00) on high drywell pressure. Plant conditions are as follows:

- **Reactor Pressure** — **50 psig**
- **Reactor Level** — **-50 inches rising slowly**
- **Suppression Pool Level** — **0 inches**
- **Suppression Pool Temperature** — **200F rising slowly**
- **Suppression Chamber Pressure** — **5 psig**
- **Drywell Temperature** — **240F rising slowly**
- **Drywell Pressure** — **5 psig**
- **B RHR is in Torus Cooling** — **10000 gpm**

What is the maximum Suppression Pool Temperature that ensures NPSH is maintained for the B RHR PUMP (BP202)?

ADMINISTRATIVE TOPICS

Facility: HOPE CREEK Date of Examination: _____

Examination Level: ☒ RO ☐ SRO Operating Test Number: _____

TOPIC: A.1-2 QUESTION: 2

Subject Description: Plant Parameter Verification

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

DESCRIPTION: Question-Determine the Control Rod Drive Hydraulic Unit Pre-Charge Pressure.

QUESTION:

Given the following:

- Control Rod 02-35 is being returned to service in accordance with HC.OP-SO.BF-0002(Q), Individual CRD Operation
- Control Rod 02-35 was isolated for maintenance
- Reactor Building ambient temperature is 75F

Determine the proper Accumulator precharge pressure for Control Rod 02-35.

ANSWER: Reference HC.OP-SO.BF-0002(Q), Figure 3-2

581 (±5) psig

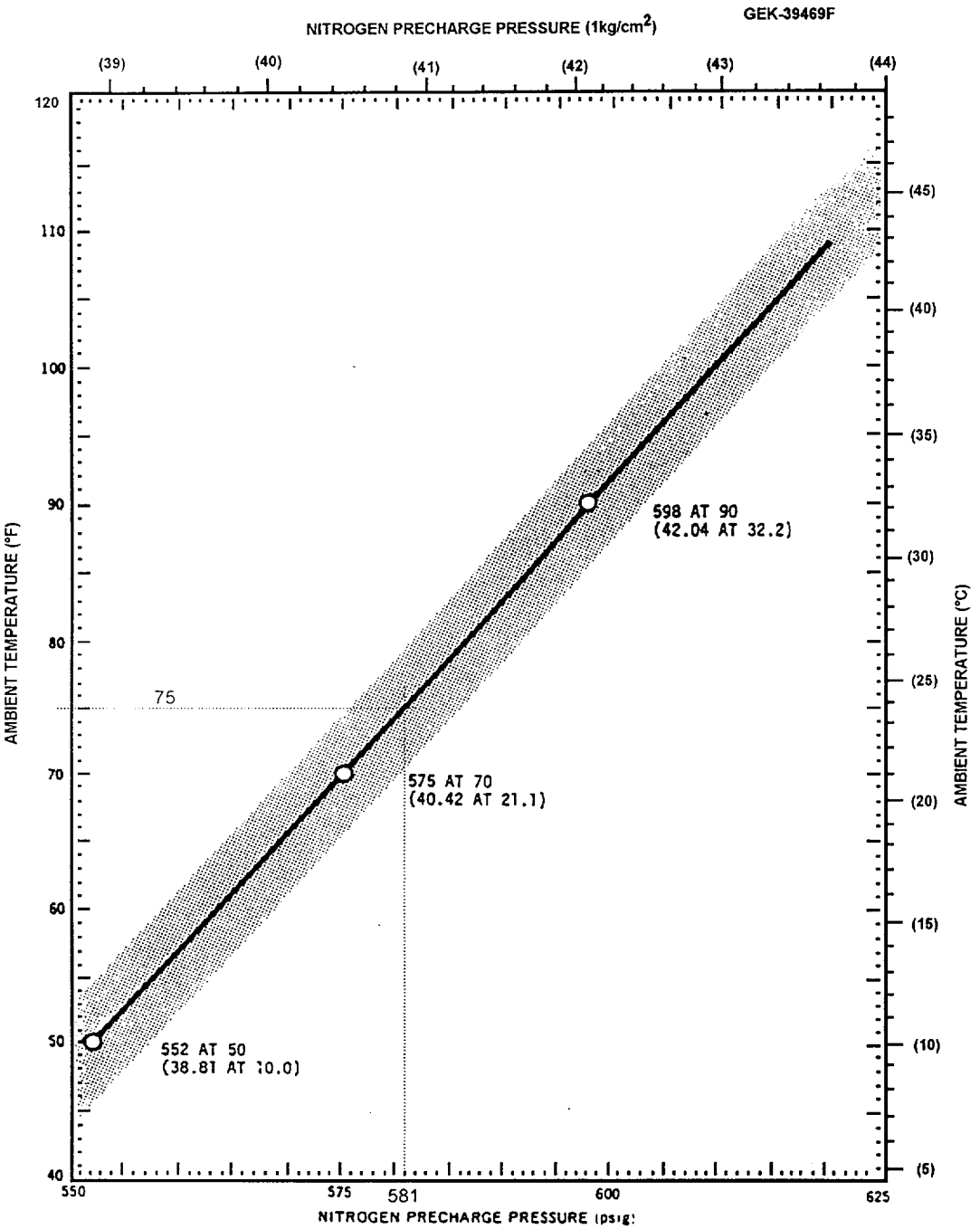


Figure 3-2. Accumulator Precharge Nitrogen Pressure Versus Ambient Temperature

Given the following:

- **Control Rod 02-35 is being returned to service in accordance with HC.OP-SO.BF-0002(Q), Individual CRD Operation**
- **Control Rod 02-35 was isolated for maintenance**
- **Reactor Building ambient temperature is 75F**

Determine the proper Accumulator precharge pressure for Control Rod 02-35.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK

SYSTEM: Reactor Instrumentation

TASK: Perform An Accident Monitoring Instrumentation Channel Check

TASK NUMBER: 2160010201

JPM NUMBER: [ROA.2]

ALTERNATE PATH: [ ]

K/A NUMBER: 2.2.12

IMPORTANCE FACTOR: 3.0 (RO) ____ (SRO)

APPLICABILITY:

EO [ ] **RO** [X] **STA** [ ] **SRO** [ ]

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-ST.SH-0001(Q), Rev. 19

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: (8) Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

CAUTION: **No plant equipment shall be operated during the performance of a JPM without the following:**

1. **Permission from the OS or Unit CRS;**
2. **Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).**
3. **Verification of the "as left" condition by a qualified individual.**

ACTUAL JPM COMPLETION TIME: _____ Minutes

ACTUAL TIME CRITICAL COMPLETION: N/A

JPM PERFORMED BY: _____ **GRADE:** [ ] **SAT** [ ] **UNSAT**

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____ **DATE:** _____

NAME: _____

DATE: _____

SYSTEM: Reactor Instrumentation

TASK: Perform An Accident Monitoring Instrumentation Channel Check

TASK NUMBER: 2160010201

INITIAL CONDITIONS:

1. HC.OP-ST.SH-0001(Q), Accident Monitoring Instrumentation Channel Check – Monthly is required.
2. No other testing or maintenance is in progress that will adversely affect the performance of this test.

INITIATING CUE:

Perform Steps 5.1 through 5.6 of HC.OP-ST.SH-0001(Q). Another operator will complete the rest of the Surveillance.

Successful Completion Criteria:

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

NAME: _____
DATE: _____

SYSTEM: Reactor Instrumentation
TASK: Perform An Accident Monitoring Instrumentation Channel Check

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
			Examiner Cue: Provide the operator with a copy of the partially completed procedure HC.OP-ST.SH-0001(Q).		
		Operator reviews precautions and limitations.	Operator reviews precautions and limitations. Examiner Cue: If **excessive time is taken to review precautions and limitations, inform operator that all are satisfied.** **Examiner Note:** Initialling the following steps is not critical.		
	5.1	**LOG** test start time in the Control Room log(s).	Operator requests that the start time be logged in the Control Room log. **Examiner Cue: The test start time has been logged in the Control Room log.** Operator initials the step.		
	5.2	**ENSURE** that all prerequisites have been satisfied IAW Section 2.0.	Operator ensures that the prerequisites are satisfied: Operator completes Attachment 1 Section 3.0 before performing any part of this procedure. Operator initials the step.		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Instrumentation
TASK: Perform An Accident Monitoring Instrumentation Channel Check

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.3	**ENSURE** Attachment 1, Section 1 of the OS/CRS Data and Signature Sheet has been completed AND Regular Surveillance OR Retest is indicated.	Operator observes that Attachment 1, Section 1.0 of the OS/CRS Data and Signature Sheet has been completed and Regular Surveillance is indicated. Operator initials the step.		
		START TIME:_____			
	5.4	**PERFORM** a Channel Check of the following Reactor Vessel Pressure instruments, **RECORD** AND **COMPARE** the indicated pressure readings on Attachment 2: [**T/S 4.3.7.5-1, item 1**]	N/A	N/A	N/A
*	5.4.1	REACTOR PRESSURE Indicator PI-3684A (Red)	Operator records the value of PI-3684A (Red) on Attachment 2. [995 psig]		
*	5.4.2	REACTOR PRESSURE Recorder PR-3684B (Red pen)	Operator records the value of PR-3684B (Red pen) on Attachment 2. [992 psig]		
*	5.4.3	**VERIFY** Reactor Pressure instrumentation Channel Check complete, **ENTER** SAT or UNSAT AND **INITIAL** the appropriate space on Attachment 2.	Operator compares the values recorded for PI-3684A (Red) and PR-3684B (Red pen) and verifies they are within 75 psig. Then enters SAT and intials the appropriate space on Attachment 2.		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Instrumentation
TASK: Perform An Accident Monitoring Instrumentation Channel Check

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.5	**PERFORM** a Channel Check of the following Reactor Vessel Water Level instruments, **RECORD** AND **COMPARE** the indicated level readings on Attachment 2: **[T/S 4.3.7.5-1, item 2]**	N/A	N/A	N/A
*	5.5.1	REACTOR FUEL ZONE Water Level Recorder LR-R615 (10C650 A Subsection F)	Operator records the value of LR-R615 (10C650 A Subsection F) on Attachment 2. [-111 inches]		
*	5.5.2	REACTOR FUEL ZONE Water Level Indicator LI-R610 (10C650 A Subsection G)	Operator records the value of LI-R610 (10C650 A Subsection G) on Attachment 2. [-111 inches]		
*	5.5.3	REACTOR CHANNEL A Water Level Recorder LR-R623A (Red pen)	Operator records the value of LR-R623A (Red pen) on Attachment 2. [32 inches]		
*	5.5.4	REACTOR CHANNEL B Water Level Recorder LR-R623B (Red pen)	Operator records the value of LR-R623B (Red pen) on Attachment 2. [26 inches]		
*	5.5.5	REACTOR WATER Level Recorder LR-3622A (Blue pen)	Operator records the value of LR-3622A (Blue pen) on Attachment 2. [26 inches]		
*	5.5.6	REACTOR WATER Level Recorder LR-3622B (Blue pen)	Operator records the value of LR-3622B (Blue pen) on Attachment 2. [28 inches]		

NAME: _____
DATE: _____

SYSTEM: Reactor Instrumentation
TASK: Perform An Accident Monitoring Instrumentation Channel Check

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	5.5.7	**VERIFY** Reactor Water Level instrumentation Channel Check complete, **ENTER** SAT or UNSAT AND **INITIAL** the appropriate space on Attachment 2.	Operator compares the values recorded for: • LR-R615 (10C650 A Subsection F), • LI-R610 (10C650 A Subsection G) • LR-R623A (Red pen) • LR-R623B (Red pen) And verifies they are within 10 inches, AND, • LR-3622A (Blue pen) • LR-3622B (Blue pen), Are within 20 inches, Then enters SAT and intials the appropriate space on Attachment 2. Operator: refers to **NOTE 1**, determines that LR-R623B and LR-R623A exceeds half the required value, and notifying System Engineering is required.		
	5.6	**PERFORM** a Channel Check of the following Suppression Pool Water Level instruments, **RECORD** AND **COMPARE** the indicated level readings on Attachment 2: **[T/S 4.3.7.5-1, item 3]**	N/A	N/A	N/A
*	5.6.1	SUPPRESSION POOL Water Level Recorder LR-4805-1 (10C650B Subsection B)	Operator records the value of LR-4805-1 (10C650B Subsection B) on Attachment 2. [76.3 inches]		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Reactor Instrumentation
TASK: Perform An Accident Monitoring Instrumentation Channel Check

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	5.6.2	SUPPRESSION POOL Water Level Indicator LI-4801	Operator records the value of LI-4801 on Attachment 2. [76.5 inches]		
*	5.6.3	**VERIFY** Suppression Pool Water Level instrumentation channel check complete, **ENTER** SAT or UNSAT AND **INITIAL** the appropriate space on Attachment 2. [**CD-488E**]	Operator compares the values recorded for LR-4805-1 and LI-4801 and verifies they are within 9 inches. Then enters SAT and intials the appropriate space on Attachment 2.		
		STOP TIME: _____			

Terminating Cue: Repeat back message from the operator on the status of the JPM, and then state "This JPM is complete"

INITIAL CONDITIONS:

1. **HC.OP-ST.SH-0001(Q), Accident Monitoring Instrumentation Channel Check – Monthly is required.**
2. **No other testing or maintenance is in progress that will adversely affect the performance of this test.**

INITIATING CUE:

Perform Steps 5.1 through 5.6 of HC.OP-ST.SH-0001(Q). Another operator will complete the rest of the Surveillance.

Reset to an 100% IC

Complete Section 1 of HC.OP-ST.SH-0001(Q) to support the surveillance

Insert the following Instructor Overrides (IOs):

I/O OVERRIDE SUMMARY:

Initial	Description	Delay	Ramp	Remote/Event	Init Val	Final
____	1. 8AR22 R AO REAC LEVEL LR-R623A-B21					32
____	2. 8AR22 R AO REAC LEVEL LR-R623B-B21					28
____	3. 8AR AO PRESS PR-3684B					1060

VERIFY:
LR-R623A-B21 indicates 32
LR-R623B-B21 indicates 26.

Check other indications and compare to PM. Adjust as necessary.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK

SYSTEM: Administrative

TASK: Respond To An Abnormal Release Of Gaseous Radioactivity
Calculate Total Noble Gas Release Rate

TASK NUMBER: 4000270401

JPM NUMBER: [ROA.3]

ALTERNATE PATH: [ ]

K/A NUMBER: 2.3.11

IMPORTANCE FACTOR: 2.7 (RO) ____ (SRO)

APPLICABILITY:
EO [ ] RO [X] STA [ ] SRO [ ]

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: HC.OP-AB.CONT-0004(Q), Rev.: 0

TOOLS AND EQUIPMENT: Calculator

VALIDATED JPM COMPLETION TIME: (4) Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

CAUTION: **No plant equipment shall be operated during the performance of a JPM without the following:**
1. **Permission from the OS or Unit CRS;**
2. **Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).**
3. **Verification of the "as left" condition by a qualified individual.**

ACTUAL JPM COMPLETION TIME: _____ Minutes

ACTUAL TIME CRITICAL COMPLETION: N/A

JPM PERFORMED BY: _____ **GRADE:** [ ] **SAT** [ ] **UNSAT**

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____ **DATE:** _____

NAME: _____

DATE: _____

SYSTEM: Administrative

TASK: Respond To An Abnormal Release Of Gaseous Radioactivity
Calculate Total Noble Gas Release Rate

TASK NUMBER: 4000270401

INITIAL CONDITIONS:

1. The plant is operating at 100% power.
2. A Fuel Bundle was damaged while being moved in the Spent Fuel Pool.
3. Rising activity is observed on the following RM-11 radiation monitors:
   - South Plant Vent (SPV) (9RX580)
   - Refuel Floor Exhaust A, B, and C (9RX627, 628, 629)
4. SPDS is unavailable.
5. Abnormal HC.OP-AB.CONT-0004(Q), Radioactive Gaseous Release, and HC.OP-AB.CONT-0005(Q), Irradiated Fuel Damage, are being executed concurrently to stop the release of activity.

INITIATING CUE:

Using the RM-11, determine the Total Noble Gas Release Rate in accordance with Action A.4 of HC.OP-AB.CONT-0004(Q).

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM:
TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains/locates procedures HC.OP-AB.CONT-0004(Q).	Operator obtains the correct procedures.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step to be A.4.		
		START TIME: _____			
	A.4	**DETERMINE** the Total Release Rates of Noble Gas and Iodine as follows: • **USE** the SPDS Noble Gas Total. OR • **USE** one of the Formulas in Table "A".	Operator manipulates the RM-11 terminal to obtain the values of Noble Gas release from the 9RX580, 9RX590, 9RX680, and 9RX518 detectors and enters the value into the formula; then the operator calulates the Total Noble Gas Release Rate.		
*		$\frac{4.18E+01}{\mu Ci/sec}$ SPV (9RX580) + $\frac{1.04E+01}{\mu Ci/sec}$ NPV (9RX590) + $\frac{1.46E+00}{\mu Ci/sec}$ FRVS (9RX680) + $\frac{0.00E+00}{\mu Ci/sec}$ HTV (9RX518) = $\frac{5.366E+01}{\mu Ci/sec}$ Total Calculated Value = (± 0.1, 5.266E+01-5.466E+01) **Examiner Note:** Values need NOT be expressed in scientific notation.		
		STOP TIME: _____			

Terminating Cue: Repeat back message from the operator on the status of the JPM, and then state "This JPM is complete"

INITIAL CONDITIONS:

1. The plant is operating at 100% power.
2. A Fuel Bundle was damaged while being moved in the Spent Fuel Pool.
3. Rising activity is observed on the following RM-11 radiation monitors:
   - South Plant Vent (SPV) (9RX580)
   - Refuel Floor Exhaust A, B, and C (9RX627, 628, 629)
4. SPDS is unavailable.
5. Abnormal HC.OP-AB.CONT-0004(Q), Radioactive Gaseous Release, and HC.OP-AB.CONT-0005(Q), Irradiated Fuel Damage, are being executed concurrently to stop the release of activity.

INITIATING CUE:

Using the RM-11, determine the Total Noble Gas Release Rate in accordance with Action A.4 of HC.OP-AB.CONT-0004(Q).

Reset to IC-1

Insert Malfunctions:

MALFUNCTION SUMMARY:

Initial	Description	Delay	Ramp	Remote/Event	Initial	Final
____ 1.	RM9627			Preinsert		1.38E-3
____ 2.	RM9628			Preinsert		1.44E-3
____ 3.	RM9629			Preinsert		1.49E-3
____ 4.	RM9580			Preinsert		1.46
____ 5.	AN-C6C5 CRYWOLF ANN C6C5 SPDS SYS TROUBLE			Preinsert		
____ 6.	CC03 SPDS FAILURE			Preinsert		

Manually place FRVS in service IAW HC.OP-SO.GU-0001.

Put the Simulator in FREEZE.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: HOPE CREEK

SYSTEM: Emergency/ECG/E-Plan/Fire & Medical

TASK: Complete a Major Equipment and Electrical Status (MEES) Form

TASK NUMBER:

JPM NUMBER: [ROA.4]

ALTERNATE PATH: [ ]

K/A NUMBER: 2.4.39

IMPORTANCE FACTOR: 3.3 (RO) ____ (SRO)

APPLICABILITY:

EO [ ] **RO** [X] **STA** [ ] **SRO** [ ]

EVALUATION SETTING/METHOD: Simulator/Perform

REFERENCES: Hope Creek Event Classification Guide, Attachment 8, Revision 07

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: (10) Minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

CAUTION: **No plant equipment shall be operated during the performance of a JPM without the following:**

1. **Permission from the OS or Unit CRS;**
2. **Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions).**
3. **Verification of the "as left" condition by a qualified individual.**

ACTUAL JPM COMPLETION TIME: _____ Minutes

ACTUAL TIME CRITICAL COMPLETION: N/A

JPM PERFORMED BY: _____ **GRADE:** [ ] **SAT** [ ] **UNSAT**

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____ **DATE:** _____

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Emergency/ECG/E-Plan/Fire & Medical

TASK: Complete a Major Equipment and Electrical Status (MEES) Form

TASK NUMBER:

INITIAL CONDITIONS:

1. You are the On-Shift Plant Operator designated as Communicator 2.
2. The plant has experienced a LOCA followed by a LOP when the Main Generator locked out.

INITIATING CUE:

Complete a Major Equipment and Electrical Status (MEES) Form in accordance with ECG Attachment 8.

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

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Emergency/ECG/E-Plan/Fire & Medical
TASK: Complete a Major Equipment and Electrical Status (MEES) Form

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Operator obtains and locates Attachment 8 of the Hope Creek ECG.	Operator obtains the correct procedure. Examiner Note: It is acceptable to provide the operator the Attachment.		
		Operator determines beginning step of the procedure.	Operator determines correct beginning step of procedure to be B.1.		
	B.1.	START TIME: _____ WHEN in an ALERT or higher emergency OR AFTER significant changes in plant status; THEN COMPLETE the Major Equipment and Electrical Status (MEES) Form.	Operator enters the date, time, and completes the Major Equipment and Electrical Status (MEES) Form, while walking-down the control room boards.		
			Examiner Cue: WHEN the operator asks for the status of 1BC663, B Hydrogen Recombiner, STATE that it is not in service but is available.		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Emergency/ECG/E-Plan/Fire & Medical
TASK: Complete a Major Equipment and Electrical Status (MEES) Form

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*		STOP TIME: _____	Operator initials the Major Equipment and Electrical Status (MEES) Form. (NOT Critical) **Examiner Note:** See attached for the completed Form. **Examiner Note:** PCIG compressors may be marked as OUT OF SERVICE(N) or as IN SERVICE(Y). **CRITICAL NOTATIONS ARE:** • Correct status of: o C RHR Pump o All SSW Pumps o All SACS Pumps o All Core Spray Pumps o All EDG, Running and Loaded o A, B, and D RHR Pumps		

Terminating Cue: Repeat back message from the operator on the status of the JPM, and then state "This JPM is complete"

INITIAL CONDITIONS:

1. **You are the On-Shift Plant Operator designated as Communicator 2.**
2. **The plant has experienced a LOCA followed by a LOP when the Main Generator locked out.**

INITIATING CUE:

Complete a Major Equipment and Electrical Status (MEES) Form in accordance with ECG Attachment 8.

Reset Simulator to an 100% IC. (Keep simulator in freeze.)

Tag out the B CRD Pump. (3A83 F LO to OFF, place bezel cover over controls)

Insert RR31A2 at 100%.

Insert RH04C.

Insert EG12 with a 120 second time delay.

Place the simulator in RUN.

Take all scram actions.

Restore 1E Breakers.

Restore PCIG.

Allow plant conditions to stabilize.

Acknowledge all alarms and flashing indications.

Place the simulator in freeze.

HOPE CREEK
MAJOR EQUIPMENT AND ELECTRICAL STATUS

DATE: TODAY
UPDATE TIME: NOW

NOTE: Y = IN SERVICE
N = OUT OF SERVICE
(CIRCLE ANY UNAVAILABLE EQUIPMENT)

WATER COOLING SYSTEMS		ELECT. FEED	Y/N
SW PUMPS	A	A401	Y
	C	A403	Y
	B	A402	Y
	D	A404	Y
SACS PUMPS	A	A401	Y
	C	A403	Y
	B	A402	Y
	D	A404	Y
RACS PUMPS	A	B415	N
	B	B426	N
	C	B250	(N)
CIRC WATER PUMPS	A	A501	(N)
	B	A502	(N)
	C	A501	(N)
	D	A502	(N)

CONDENSATE/ FEEDWATER		ELECT. FEED	Y/N
PRIMARY CONDENSATE PUMPS	A	A110	(N)
	B	A120	(N)
	C	A102	(N)
SECONDARY CONDENSATE PUMPS	A	A110	(N)
	B	A120	(N)
	C	A104	(N)
FEED WATER PUMPS	A	STEAM	(N)
	B	STEAM	(N)
	C	STEAM	(N)

REACTIVITY CONTROL		ELECT. FEED	Y/N
SLC PUMPS	A	B212	N
	B	B222	N
RWCU PUMPS	A	B254	(N)
	B	B264	(N)
REACTOR RECIRC PUMPS	A	A110	(N)
	B	A120	(N)
CRD PUMPS	A	B430	N
	B	B440	(N)

ELECTRICAL STATUS	Y/N
OFFSITE AC POWER AVAILABLE	(N)

EMERGENCY DIESELS		RUN	LOADED
EDG	A	Y	Y
	B	Y	Y
	C	Y	Y
	D	Y	Y

HVAC		ELECT. FEED	Y/N
TURBINE BLDG CHILLED WATER CHILLERS	A	A110	(N)
	B	A120	(N)
	C	A101	(N)
	D	A110	(N)
TURBINE BLDG CHILLED WATER CIRC PUMPS	A	B130	(N)
	B	B120	(N)
	C	B110	(N)
CONTROL AREA CHILLED WATER CIRC PUMPS	A	B431	Y
	B	B441	Y
CONTROL AREA CHILLED WATER CHILLERS	A	A403	Y
	B	A404	Y
TSC CHILLED WATER CIRC PUMPS	A	B451	Y
	B	B461	Y
TSC CHILLED WATER CHILLERS	A	A401	Y
	B	A402	Y

CONTAINMENT CONTROL		ELECT. FEED	Y/N
FRVS RECIRC FANS	A	B410	Y
	E	B450	Y
	B	B420	Y
	F	B460	Y
	C	B430	Y
	D	B440	Y
FRVS VENT FANS	A	B212	Y
	B	B222	Y
H2 RECOMBINERS	A	B410	N
	B	B480	N
PCIG COMPRESSORS	A	B232	Y
	B	B242	Y

SERVICE AIR COMPRESSORS	ELECT. FEED	Y/N
00K107	A120	(N)
10K107	A110	(N)

EMER. INST. AIR COMPRESSOR	ELECT. FEED	Y/N
10K100	B450	(N)

ECCS		ELECT. FEED	Y/N
RHR PUMPS	A	A401	Y
	C	A403	(N)
	B	A402	Y
	D	A404	Y
RCIC PUMPS		STEAM	(N)
HPCI PUMPS		STEAM	(N)
CORE SPRAY PUMPS	A	A401	Y
	C	A403	Y
	B	A402	Y
	D	A404	Y

LICENSED OPERATOR REVIEW: *INITIALS*
INITIALS