

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

APPLICABILITY:

EO ☐

RO ☒

STA ☐

SRO ☐

RO

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	<u>IF</u> this is the first subsection of this procedure to be performed, <u>THEN</u> 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 <u>AND</u> Regular Surveillance <u>OR</u> Retest is indicated.	Operator ensures that Section 1.0 of Attachment 1 has been completed and Retest is indicated.		

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)
	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: <ul style="list-style-type: none"> 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.		

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)
	5.4.5	<p><u>IF</u> this is the final subsection of the procedure to be performed, <u>THEN</u> PERFORM the following:</p> <p>A. LOG test end time in the Control Room log(s).</p>	<p>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.</p> <p>Examiner Cue: The test end time is logged in the Control Room log.</p>		
		<p>B. SUBMIT the procedure to the OS/CRS for review <u>AND</u> completion of Attachment 1.</p>	<p>Operator submits the procedure to the OS/CRS for review and completion of Attachment 1.</p>		
		<p>STOP TIME: _____</p>			

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

**JOB PERFORMANCE MEASURE
SIMULATOR INSTRUCTIONS**

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.

JOB PERFORMANCE MEASURE

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).

ADMINISTRATIVE TOPICS

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 position 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

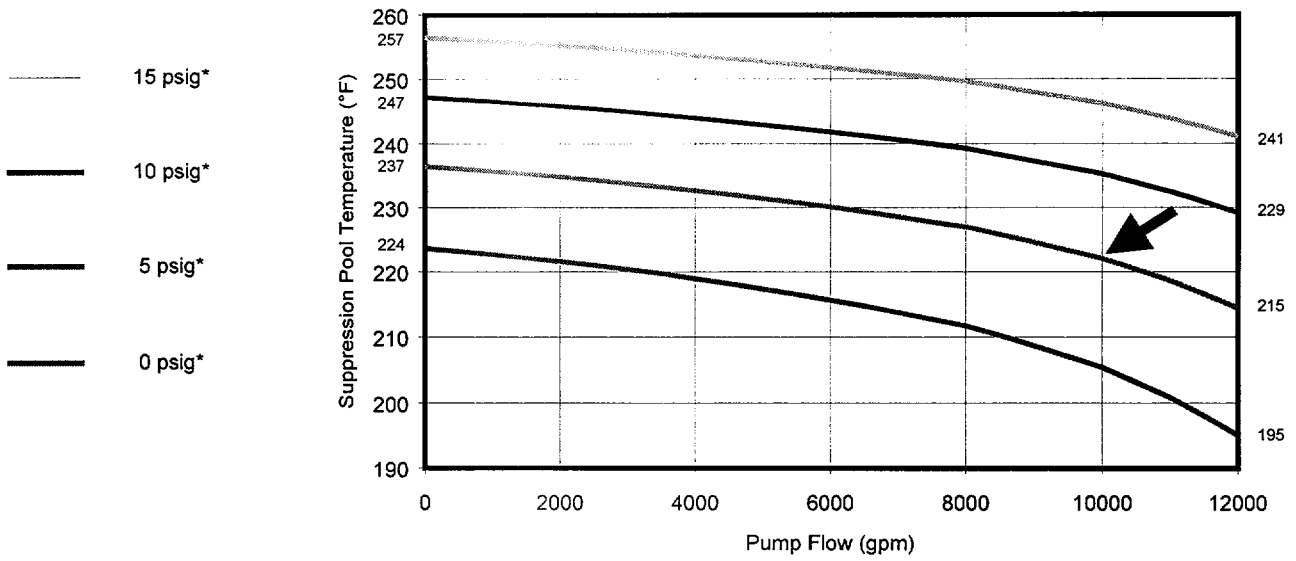
What is the maximum Suppression Pool Temperature that ensures NPSH is maintained for the B RHR PUMP (BP202)?

ANSWER: Reference EOP CAUTION 2

223F (± 2)

ADMINISTRATIVE TOPICS

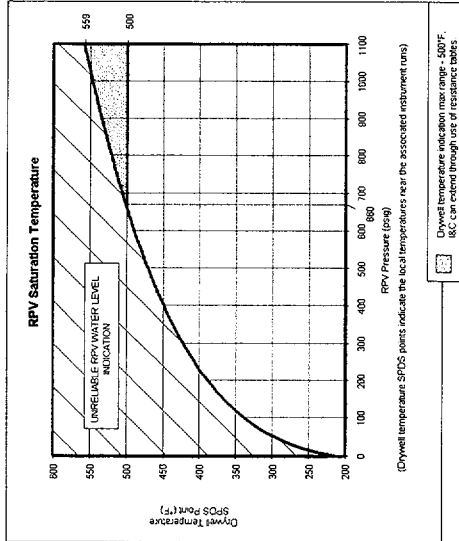
RHR NPSH Limit



TRAINING ONLY

EOP CAUTION 1

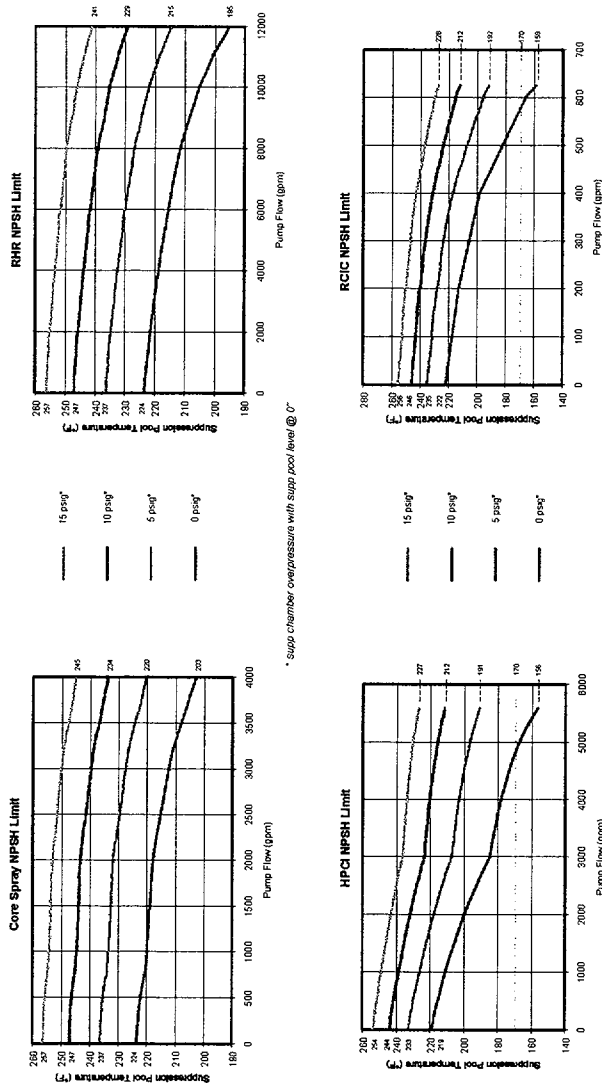
- A Under conditions of elevated drywell temperature, channels A and B of the wide, narrow and upset RPV water level instruments provide the most reliable indications
- B If any drywell temperature SPDS point exceeds the RPV saturation temperature, the associated level instruments may be unreliable



Drywell Temperature SPDS Points	Associated RPV Water Level Instruments
A2366	<ul style="list-style-type: none">LR-R8725A-E21 Wide Range A (-150 to +60 in.)LR-R8725A-E21 Wide Range B (-150 to +60 in.)LR-R8725A-E21 Wide Range C (-150 to +60 in.)LR-R8725A-E21 Fuel Zone A (-311 to -111 in.)
A2274	<ul style="list-style-type: none">LR-R8725A-E21 Wide Range A (-150 to +60 in.)LR-R8725A-E21 Wide Range B (-150 to +60 in.)LR-R8725A-E21 Fuel Zone A (-311 to -111 in.)
A2277	<ul style="list-style-type: none">LR-R8725A-E21 Wide Range A (-150 to +60 in.)LR-R8725A-E21 Wide Range B (-150 to +60 in.)LR-R8725A-E21 Fuel Zone A (-311 to -111 in.)
A2260	<ul style="list-style-type: none">LR-R8725A-E21 Fuel Zone A (-311 to -111 in.)
A2261	<ul style="list-style-type: none">LR-R8725A-E21 Fuel Zone B (-311 to -111 in.)
A2263	<ul style="list-style-type: none">LR-R8725A-E21 Wide Range A (-150 to +60 in.)LR-R8725A-E21 Wide Range B (-150 to +60 in.)LR-R8725A-E21 Fuel Zone A (-311 to -111 in.)
A2264	<ul style="list-style-type: none">LR-R8725A-E21 Wide Range B (-150 to +60 in.)LR-R8725A-E21 Wide Range C (-150 to +60 in.)LR-R8725A-E21 Fuel Zone B (-311 to -111 in.)
A2267	<ul style="list-style-type: none">LR-R8725A-E21 Fuel Zone B (-311 to -111 in.)

EOP CAUTION 1
MOPE CREEK
GENERATING STATION
REV 01
DATE 5/2/09

EOP CAUTION 2



* supp chamber overpressure with supp pool level @ 0"

TRAINING ONLY

ADMINISTRATIVE TOPICS

Given the following:

The reactor has scrammed (all control rods are at position 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: <u>HOPE CREEK</u>	Date of Examination: _____
Examination Level: <input checked="" type="checkbox"/> RO <input type="checkbox"/> SRO	Operating Test Number: _____
TOPIC: <u>A.1-2</u> QUESTION: <u>2</u>	
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: <ul style="list-style-type: none">• 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 (\pm 5) psig	

ADMINISTRATIVE TOPICS

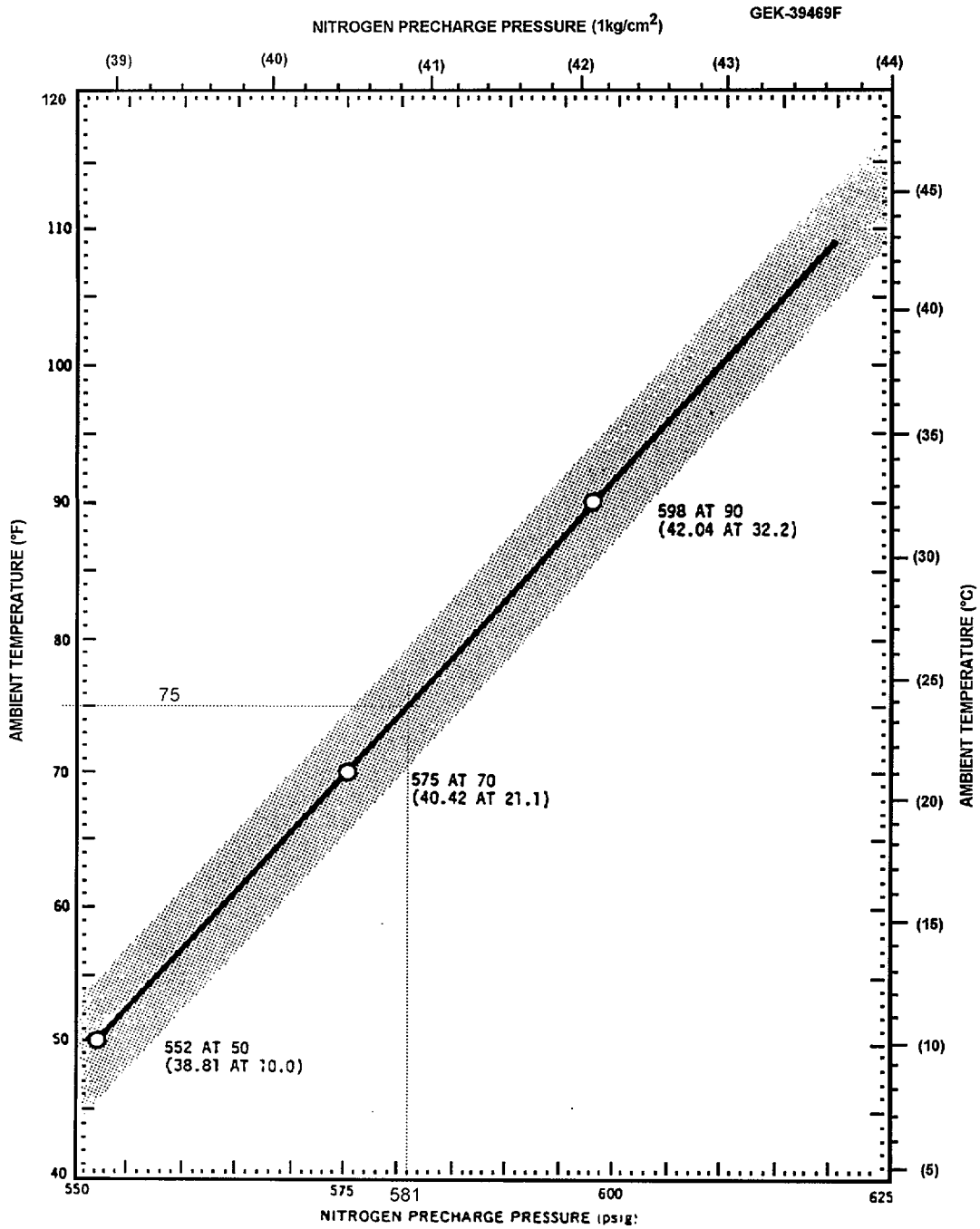


Figure 3-2. Accumulator Precharge Nitrogen Pressure Versus Ambient Temperature

ADMINISTRATIVE TOPICS

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 ☒

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: _____

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

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.

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)
			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 <u>AND</u> Regular Surveillance <u>OR</u> 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 <u>AND INITIAL</u> 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 initials 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]		

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)
*	5.5.7	VERIFY Reactor Water Level instrumentation Channel Check complete, ENTER SAT or UNSAT AND INITIAL the appropriate space on Attachment 2.	<p>Operator compares the values recorded for:</p> <ul style="list-style-type: none"> • LR-R615 (10C650 A Subsection F), • LI-R610 (10C650 A Subsection G) • LR-R623A (Red pen) • LR-R623B (Red pen) <p>And verifies they are within 10 inches, AND,</p> <ul style="list-style-type: none"> • LR-3622A (Blue pen) • LR-3622B (Blue pen), <p>Are within 20 inches,</p> <p>Then enters SAT and initials the appropriate space on Attachment 2.</p> <p>Operator: refers to NOTE 1, determines that LR-R623B and LR-R623A exceeds half the required value, and notifying System Engineering is required.</p>		
	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 initials 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"

JOB PERFORMANCE MEASURE

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.

JOB PERFORMANCE MEASURE
SIMULATOR INSTRUCTIONS

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 JPM. 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 ☒

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: _____

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

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: <ul style="list-style-type: none"> USE the SPDS Noble Gas Total. <p style="text-align: center;"><u>OR</u></p> <ul style="list-style-type: none"> 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 calculates the Total Noble Gas Release Rate.		
*		$\frac{4.18\text{E}+01}{\mu\text{Ci/sec}} + \frac{1.04\text{E}+01}{\mu\text{Ci/sec}} + \frac{1.46\text{E}+00}{\mu\text{Ci/sec}} + \frac{0.00\text{E}+00}{\mu\text{Ci/sec}} = \frac{5.366\text{E}+01}{\mu\text{Ci/sec}}$ <p style="text-align: center;">SPV NPV FRVS HTV Total (9RX580) (9RX590) (9RX680) (9RX518)</p> <p style="text-align: center;">Calculated Value = (± 0.1, 5.266E+01-5.466E+01)</p> <p style="text-align: center;">Examiner Note: Values need <u>NOT</u> be expressed in scientific notation.</p>			
		STOP TIME: _____			

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

JOB PERFORMANCE MEASURE

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).

JOB PERFORMANCE MEASURE
SIMULATOR INSTRUCTIONS

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
	AN-C6C5 CRYWOLF ANN C6C5 SPDS SYS					
___ 5.	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

APPLICABILITY:

RO

SRO

EO ☐

RO ☒

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: _____ <u>WHEN</u> in an <u>ALERT</u> or higher <u>emergency</u> <u>OR</u> <u>AFTER</u> significant changes in plant status; <u>THEN</u> <u>COMPLETE</u> 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: _____	<p>Operator initials the Major Equipment and Electrical Status (MEES) Form. (NOT Critical)</p> <p>Examiner Note: See attached for the completed Form.</p> <p>Examiner Note: PCIG compressors may be marked as OUT OF SERVICE(N) or as IN SERVICE(Y).</p> <p><u>CRITICAL NOTATIONS ARE:</u></p> <ul style="list-style-type: none"> • Correct status of: <ul style="list-style-type: none"> ○ C RHR Pump ○ All SSW Pumps ○ All SACS Pumps ○ All Core Spray Pumps ○ All EDG, Running and Loaded ○ 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"

JOB PERFORMANCE MEASURE

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.

JOB PERFORMANCE MEASURE
SIMULATOR INSTRUCTIONS

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.

EXAMINER'S COPY FOR TRAINING ONLY

ECG
ATT 8
Pg. 5 of 9

HOPE CREEK						DATE: <u>TODAY</u>											
MAJOR EQUIPMENT AND ELECTRICAL STATUS						UPDATE TIME: <u>NOW</u>											
NOTE: Y = IN SERVICE N = OUT OF SERVICE (CIRCLE ANY UNAVAILABLE EQUIPMENT)			REACTIVITY CONTROL		ELECT. FEED	Y/N	CONTAINMENT CONTROL	ELECT. FEED	Y/N								
			SLC PUMPS	A	B212	N	FRVS RECIRC FANS	A	B410	Y							
				B	B222	N		E	B450	Y							
			RWCU PUMPS	A	B254	(N)		B	B420	Y							
				B	B264	(N)		F	B460	Y							
			REACTOR RECIRC PUMPS	A	A110	(N)	C	B430	Y								
				B	A120	(N)	D	B440	Y								
			CRD PUMPS	A	B430	N	FRVS VENT FANS	A	B212	Y							
				B	B440	(N)	B	B222	Y								
			WATER COOLING SYSTEMS SW PUMPS			ELECT. FEED	Y/N	ELECTRICAL STATUS OFFSITE AC POWER AVAILABLE (N) EMERGENCY DIESELS		H2 RECOMBINERS	A	B410	N				
A	A401	Y				B	B480			N							
C	A403	Y				PCIG COMPRESSORS	A			B232	Y						
B	A402	Y				B	B242			Y							
D	A404	Y	EDG	A	Y	Y	SERVICE AIR COMPRESSORS 00K107 10K107	ELECT. FEED	Y/N								
SACS PUMPS	A	A401	Y	B	Y	Y		A120	(N)								
	C	A403	Y	C	Y	Y		A110	(N)								
	B	A402	Y	D	Y	Y											
D	A404	Y															
RACS PUMPS			A	B415	N	HVAC TURBINE BLDG		ELECT. FEED	Y/N	EMER. INST. AIR COMPRESSOR	ELECT. FEED	Y/N					
			B	B426	N			A	A110	(N)	10K100	B450	(N)				
			C	B250	(N)			B	A120	(N)	ECCS RHR PUMPS	ELECT. FEED	Y/N				
			CIRC WATER PUMPS					A	A501	(N)		A	A401	Y			
B	A502	(N)				B	A403	(N)									
C	A501	(N)				C	A402	Y									
D	A502	(N)	D	A110	(N)	D	A404	Y									
CONDENSATE/FEEDWATER			ELECT. FEED	Y/N	TURBINE BLDG CHILLED WATER CIRC PUMPS		A	B130	(N)	RCIC PUMPS HPCI PUMPS		STEAM	(N)				
			PRIMARY	A			A110	(N)	B			B120	(N)	CORE SPRAY PUMPS	A	A401	Y
			CONDENSATE	B			A120	(N)	C			B110	(N)		C	A403	Y
			PUMPS	C			A102	(N)	CONTROL AREA			A	B431		Y	B	A402
SECONDARY CONDENSATE PUMPS			A	A110	(N)	CHILLED WATER			D	A404	Y						
			B	A120	(N)	CIRC PUMPS	B	B441	Y								
			C	A104	(N)	CONTROL AREA	A	A403	Y								
			CHILLED WATER	B	A404	Y											
FEED WATER PUMPS			A	STEAM	(N)	TSC	A	B451	Y								
			B	STEAM	(N)	CHILLED WATER											
			C	STEAM	(N)	CIRC PUMPS	B	B461	Y								
						TSC	A	A401	Y								
						CHILLED WATER											
						CHILLERS	B	A402	Y								

LICENSED OPERATOR REVIEW: INITIALS