

Facility: Indian Point 3 Exam Level (circle one): RO / SRO(I) / SRO(U)		Date of Examination: 3/19 - 30/01 Operating Test No.: _____
B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. Adjust Accumulator Pressure/Level	D	II
b. Start a RCP (starting current stays high)	A, M	IV P
c. Return Power Range NI to Service	D	VII
d. Recover a dropped rod - second rod drops	A, M	I
e. Align Safety Injection for Hot Leg Recirc	D, L	II
f. Place letdown in service in E-3	N	V
g. Turbine Trip Below P-8 - Loss of Main Feed	A, N, L	IV S
B.2 Facility Walk-Through		
a. Local Start of EDG/ Respond to Annunciator	A, M	VI
b. Align City Water to RHR Pump	D	VIII
c. Locally Emergency Borate	D, R	I
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

Facility: Indian Point 3

Date of Examination: 3/19 - 30/01

Exam Level (circle one): RO / SRO(I) / **SRO(U)**

Operating Test No.: _____

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. Start an RCP (starting current stays Hi)	A, M	IV P
b. Return Power Range NI to Service Turbine Trip Below P-8 - Loss of Feed	D A, N, C	VII IV S
c. Realign a Control Rod (second rod drops)	M	I

B.2 Facility Walk-Through

a. Local Start of EDG/ Respond to Annunicator	A, M	VI
b. Align City Water to RHR Pump	D	VIII

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

JPM NO. 033

ADJUST ACCUMULATOR LEVEL AND/OR PRESSURE AS
REQUIRED TO MAINTAIN uPARAMETERS WITHIN SPEC

Job Performance Measure Exam

Submitted By _____

Date _____

Reviewed By _____

Date _____

SME Review/Validation By _____

Date _____

Approved By _____

Date _____

JPM Tasks**Task ID:** 020*001*01*01**Description:** ADJUST ACCUMULATOR LEVEL AND/OR
PRESSURE AS REQUIRED TO MAINTAIN
PARAMETERS WITHIN SPEC

Trainee: _____ Evaluator: _____

Evaluator Signature _____ Date _____

Trainee Performance: Satisfactory _____ Unsatisfactory _____

Start Time _____ **Stop Time:** _____

When I tell you to begin, you are to perform the task listed above. I will describe general conditions standard(s), initiating cue(s), and answer any questions you have. I will provide access to any tools necessary to perform the task. You may use any approved reference material normally available. To satisfactorily complete this task, you must perform or simulate each critical element correctly. You are to inform the examiner when you have completed the task.

General Comments (For Evaluator Use):

Task Conditions:

THE PLANT IS AT 100% POWER. THE 31 ACCUMULATOR HAS A LOW LEVEL/PRESSURE.

Task Standards :

ACCUMULATOR IS RESTORED TO OPERABLE CONDITION (NO ALARMS)

Tools Needed:**Initiating Cues :**

YOU ARE DIRECTED TO FILL THE 31 ACCUMULATOR TO 30% AND CLEAR ALL ACCUMULATOR ALARMS PER SOP-SI-1 AND THE SI PUMP LCO IS EXITED OF STEP 4.7.19.

References :

ID	Description	Review Date	Ref Flag
SOP SI-1	SAFETY INJECTION SYSTEM OPERATION		<input checked="" type="checkbox"/>

Safety Considerations :**Consequences of Inadequate Performance:**

DEGRADED ECCS SYSTEM

Performance Checklist :

- 1 **Element :**
OBTAIN AND REVIEW
SOP-SI-1
Standards :
CANDIDATE REVIEWS
SOP-SI-1
Conditions :
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 2 **Element :**
ENSURE RCS PRESSURE >
1650 PSIG
Standards :
OBSERVE RCS PRESSURE
> 1650 PSIG
Conditions :
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 3 **Element :**
SECURE THE REFUELING
WATER PURIFICATION PUMP
IN ACCORDANCE WITH
SOP-SI-3
Standards :
CALL NPO TO STOP THE
REFUELING WATER
PURIFICATION PUMP
Conditions :
THIS PUMP IS NORMALLY
SECURED; CUE: NPO REPORTS
REFUELING WATER
PURIFICATION PUMP
SECURED.
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 4 **Element :**
ENSURE VALVE SI-841 IS
CLOSED, SPENT FUEL PIT
DEMINERALIZER TO RWST
ISOLATION
Standards :
CALL NPO TO VERIFY
SI-841 CLOSED
Conditions :
CUE: NPO REPORTS SI-841
CLOSED
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-

- 5 **Element :**
ENSURE SI-MOV-1810, RWST
STOP VALVE, IS OPEN (SI
PUMP ROOM)
- Standards :**
OBSERVE VALVE
POSITION FOR
SI-MOV-1810 OPEN
- Conditions :**
CAN BE VERIFIED BY
DE-ENERGIZED SI VALVE
POSITION WHITE LIGHT
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 6 **Element :**
REVIEW UNIT LOG TO
ENSURE MOTOR STARTING
REQUIREMENTS OF SOP-EL-4
HAVE BEEN SATISFIED, FOR
THE SAFETY INJECTION
PUMP
- Standards :**
LOG REVIEWED
- Conditions :**
CUE: CRS HAS REVIEWED
LOG AND STARTING
REQUIREMENTS ARE
SATISFIED FOR STARTING 31
SI PUMP. THE SI PUMP HAS
NOT BEEN RUN TODAY.
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 7 **Element :**
IF RCS TEMPERATURE IS
GREATER THAN 350 DEG F,
THEN ENTER LCO 3.3.A.4.E
FOR #31 SI PUMP
- Standards :**
CRS NOTIFIED ABOUT
ENTRY INTO LCO.
- Conditions :**
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 8 **Element :**
START 31 SI PUMP
- Standards :**
SELECT }START} ON
HANDSWITCH FOR 31 OR
32 SI PUMP; RED LIGHT
ON GREEN LIGHT OFF
- Conditions :**

Comments :

Critical Task? ☐ 0Satisfactory ☐Unsatisfactory ☐

- 9
Element :
VERIFY DISCHARGE
PRESSURE AND
RECIRCULATION FLOW
GREATER THAN 25 GPM OR
GREATER ON FI-950, SI PUMP
RECIRCULATION FLOW
INDICATOR.
- Standards :
OBSERVE DISCHARGE
PRESSURE AND CALL
NPO TO VERIFY
RECIRCULATION FLOW
- Conditions :
CUE: NPO REPORTS RECIRC
FLOW IS 50 GPM

Comments :

Critical Task? ☐ NSatisfactory ☐Unsatisfactory ☐

- 10
Element :
ENSURE SI -1837,
ACCUMULATOR FILL LINE
ISOLATION IS OPEN
- Standards :
OPEN - RED LIGHT LIT,
GREEN LIGHT OFF
- Conditions :

Comments :

Critical Task? ☐ NSatisfactory ☐Unsatisfactory ☐

- 11
Element :
VENT THE ACCUMULATOR
AS NECESSARY
- Standards :
NO PRESSURE ALARMS
WHEN JPM IS COMPLETE
- Conditions :

Comments :

Critical Task? ☐ YSatisfactory ☐Unsatisfactory ☐

12 **Element :**
FILL THE ACCUMULATOR BY
OPENING SI-AOV-890A, 31
ACCUMULATOR FILL
ISOLATION

Standards :
SELECT }OPEN} ON
SI-AOV-890A; RED LIGHT
ON, GREEN LIGHT OFF.

Conditions :
STEP 4.7.13

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

13 **Element :**
MONITOR ACCUMULATOR
LEVEL AND LEVEL ALARM

Standards :
OBSERVE
ACCUMULATOR LEVEL
INCREASING;
ACKNOWLEDGE LEVEL
ALARM WHEN CLEAR

Conditions :

Comments :

Critical Task? ☐ N

Satisfactory ☐

Unsatisfactory ☐

14 **Element :**
STOP FILLING THE
ACCUMULATOR AT
APPROXIMATELY 30%

Standards :
CLOSE SI-AOV-890A,
WHEN LEVEL
APPROXIMATELY 30%;
BOTH HIGH AND LOW
LEVEL ALARMS MUST
BE CLEAR WHEN JPM IS
COMPLETE

Conditions :

Comments :

Critical Task? ☐ 0

Satisfactory ☐

Unsatisfactory ☐

15 **Element :**
STOP THE RUNNING SI PUMP
AND POSITION PUMP
CONTROL SWITCH PER CRS.

Standards :
ROTATE SWITCH TO
STOP; GREEN LIGHT ON
AND RED LIGHT
OFF.;CONTROL SWITCH
PLACED IN AUTO

Conditions :

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

16 Element :
EXIT LCO PREVIOUSLY
ENTERED.

Standards :
CRS INFORMED ABOUT
EXITING LCO.

Conditions :

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

17 Element :
INFORM EVALUATOR THAT
JPM IS COMPLETE.

Standards :
EVALUATOR INFORMED.

Conditions :

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

Terminating Cues :

"ACCUMULATOR LOW LEVEL" ALARM IS CLEAR

JPM NO. 035

START A REACTOR COOLANT PUMP AS PER SOP-RCS-1

- HE AMPS

Job Performance Measure Exam

Submitted By _____

Date _____

Reviewed By _____

Date _____

SME Review/Validation By _____

Date _____

Approved By _____

Date _____

JPM Tasks**Task ID:** 003*006*03*01**Description:** START A REACTOR COOLANT PUMP AS
PER SOP-RCS-1

Trainee: _____ Evaluator: _____

Evaluator Signature _____ Date _____

Trainee Performance: Satisfactory _____ Unsatisfactory _____

Start Time _____ **Stop Time:** _____

When I tell you to begin, you are to perform the task listed above. I will describe general conditions standard(s), initiating cue(s), and answer any questions you have. I will provide access to any tools necessary to perform the task. You may use any approved reference material normally available. To satisfactorily complete this task, you must perform or simulate each critical element correctly. You are to inform the examiner when you have completed the task.

General Comments (For Evaluator Use):

Task Conditions:

THE PLANT IS IN HOT SHUTDOWN AND PREPARATIONS ARE BEING MADE FOR PLANT STARTUP. A BALANCE ADJUSTMENT HAS BEEN MADE ON THE #31 REACTOR COOLANT PUMP AND THE PUMP IS ALIGNED TO BE STARTED. PUMP WAS SECURED 4 HOURS AGO.

Task Standards :

START #31 RCP IN ACCORDANCE WITH SOP-RCS-1.

Tools Needed:**Initiating Cues :**

YOU ARE DIRECTED TO START THE 31 RCP PER SOP-RCS-1. PROCEDURE PREREQUISITES ARE COMPLETE, AND UNIT LOG VERIFIED TO ENSURE RCP ROTATION REQUIREMENTS ARE SATISFIED.

References :

ID	Description	Review Date	Ref Flag
SOP RCS-1	REACTOR COOLANT PUMP OPERATION		<input checked="" type="checkbox"/>

Safety Considerations :**Consequences of Inadequate Performance:**

DAMAGE TO RCP

Performance Checklist :

- 1 **Element :** ENSURE 31 RCP STANDPIPE LEVEL OFF NORMAL LIGHT IS EXTINGUISHED. (PANEL SAF)
Standards : OBSERVE LIGHT NOT ILLUMINATED
Conditions :
Comments :
Critical Task? ☒ N
Satisfactory ☐ **Unsatisfactory** ☐
-
- 2 **Element :** ENSURE 31 RCP OIL LEVEL OFF NORMAL LIGHT IS EXTINGUISHED. (PANEL SAF)
Standards : OBSERVE LIGHT NOT ILLUMINATED
Conditions :
Comments :
Critical Task? ☒ N
Satisfactory ☐ **Unsatisfactory** ☐
-
- 3 **Element :** ENSURE 31 RCP BEARING COOLANT LOW FLOW ANNUNCIATOR EXTINGUISHED. (PANEL SGF)
Standards : OBSERVE ANNUNCIATOR NOT LIT
Conditions : IF NPO IS SENT, COMBINED FLOW IS 165 GPM, LOWER BEARING FLOW IS 5.5GPM
Comments :
Critical Task? ☒ N
Satisfactory ☐ **Unsatisfactory** ☐
-
- 4 **Element :** ENSURE THERMAL BARRIER CCW HEADER LOW FLOW ANNUNCIATOR EXTINGUISHED
Standards : OBSERVE ANNUNCIATOR NOT LIT
Conditions : IF NPO IS SENT, CCW FLOW TO THE THERMAL BARRIER COOLING COIL IS >25GPM

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

Element :

Standards :

Conditions :

- 5 ENSURE RCP THERMAL
BARRIER COOLING RETURN
HIGH TEMP EXTINGUISHED

OBSERVE
ANNUNCIATOR NOT LIT

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

Element :

Standards :

Conditions :

- 6 ENSURE 31 RCP BEARING
COOLING WATER RETURN
HIGH TEMP ANNUNCIATOR
EXTINGUISHED

OBSERVE
ANNUNCIATOR NOT LIT

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

Element :

Standards :

Conditions :

- 7 ENSURE METAL IMPACT
MONITOR SYSTEM
ANNUNCIATOR
EXTINGUISHED (PANEL SGF)

OBSERVE
ANNUNCIATOR NOT LIT

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

8 **Element :**
ENSURE SEAL INJECTION
FLOW IS 6-12 GPM ON
FI-144A.

Standards :
OBSERVE SEAL
INJECTION FLOW IS
BETWEEN 6 AND 12 GPM
ON 31 RCP; IF NOT, SEAL
INJECTION FLOW IS
ADJUSTED PER
SOP-CVCS-2.

Conditions :

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

9 **Element :**
ENSURE SEAL INJECTION
TEMPERATURE IS 60-150
DEG. AS READ ON TI-140,
VCT OUTLET
EMPERATURE.

Standards :
OBSERVE SEAL
INJECTION
TEMPERATURE IS
BETWEEN 60-150 DEG F.

Conditions :

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

10 **Element :**
ENSURE VCT PRESSURE,
PI-139, IS 15-60 PSIG

Standards :
OBSERVE VCT PRESSURE
BETWEEN 15-60 PSIG

Conditions :

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

11 **Element :**
ENSURE SEAL RETURN
FLOW IS IN ACCEPTABLE
RANGE PER ATTACHMENT 1,
CP #1 SEAL NORMAL
OPERATING RANGE

Standards :
REFER TO ATTACHMENT
1 OBSERVE LEAKOFF
FLOW RATE IN NORMAL
RANGE FOR CURRENT
PLANT CONDITIONS
(SEAL DELTA P > 2000
PSIG)

Conditions :

Comments :

Critical Task?

☒ N

Satisfactory

☐

Unsatisfactory

☐

- 12
Element :
ENSURE RCS
PRESSURE-TEMPERATURE
LIMITS ARE MET PER GRAPH
RCS-1C, REACTOR COOLANT
PUMP OPERATING LIMITS
CURVE.
- Standards :
COMPARE RCS
PRESSURE AND
TEMPERATURE TO
GRAPH RCS-1C FOR
ALLOWABLE RCP
OPERATION

Conditions :

Comments :

Critical Task?

☒ N

Satisfactory

☐

Unsatisfactory

☐

- 13
Element :
DETERMINE THAT REACTOR
ENGINEER EVALUATION OF
SHUTDOWN MARGIN IS NOT
REQUIRED
- Standards :
DOES NOT DIRECT
REACTOR ENGINEER TO
EVALUATE POTENTIAL
LOSS OF SHUTDOWN
MARGIN

Conditions :
EVALUATION IS NOT
REQUIRED BECAUSE 3 RCPS
ARE RUNNING

Comments :

Critical Task?

☒ N

Satisfactory

☐

Unsatisfactory

☐

- 14
Element :
DETERMINE THAT IT IS NOT
REQUIRED TO BAR OVER
THE RCP
- Standards :
DOES NOT DIRECT AN
OPERATOR TO BAR
OVER RCP

Conditions :
CUE: IT IS NOT NECESSARY
TO BAR OVER THE RCP SINCE
THE OTHER 3 RCPS ARE
RUNNING

Comments :

Critical Task?

☒ N

Satisfactory

☐

Unsatisfactory

☐

- 15 **Element :**
VERIFY THAT TECH SPEC
LIMITS ARE MET FOR
STARTING A FOURTH RCP IF
RCS TCOLD IS AT OR BELOW
332 DEG F.
- Standards :**
TCOLD IS AT 547
ATTACHMENT 3 DOES
NOT HAVE TO BE DONE.
- Conditions :**
CUE: ALL SG PRESSURES ARE
1000 PSIG, ALL T-COLD
TEMPERATURES ARE 547
DEG., PZR LEVEL IS 30%, RCS
PRESSURE IS 2235 PSIG; CUE:
MOTOR STARTING TIMES OF
SOP-EL-4A ARE MET.

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

- 16 **Element :**
SELECT NOISE MONITOR
FOR 31 RCP. (OPERATORS
DESK)
- Standards :**
ROTATE SWITCH TO 31
RCP
- Conditions :**
NOISE MONITOR NOT
FUNCTIONAL IN SIMULATOR

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

- 17 **Element :**
SELECT SHAFT AND FRAME
VIBRATION RECORDER FOR
31 RCP (RACK C-11)
- Standards :**
ROTATE BOTH
VIBRATION RECORDER
SWITCHES TO 31 RCP
- Conditions :**

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

- 18 **Element :**
START THE BEARING LIFT
PUMP FOR 31 RCP
- Standards :**
TURN HANDSWITCH TO
{START} FOR THE 31 RCP
BEARING LIFT PUMP
- Conditions :**

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

- 19 **Element :**
VERIFY MINIMUM BEARING
LIFT OIL DISCHARGE
PRESSURE OF 500 PSIG.
(PANEL SAF)
- Standards :**
OBSERVE RCP BEARING
LIFT PRESSURE WHITE
PERMISSIVE LIGHT
ILLUMINATED
- Conditions :**
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 20 **Element :**
WAIT 2 MINUTES OR
LONGER PRIOR TO
STARTING RCP.
- Standards :**
WAIT 2 MINUTES
- Conditions :**
CUE: 2 MINUTES HAVE
ELAPSED
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 21 **Element :**
REVIEW ONOP-RCS-5 RCP
MALFUNCTIONS
- Standards :**
REVIEW ONOP-RCS-5
FOR EMERGENCY TRIP
CRITERIA.
- Conditions :**
SPRAY VALVE CONTROLLER
OPERATION NOT REQUIRED -
THREE RCPS RUNNING.
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 22 **Element :**
ADJUST 6.9KV VOLTAGE
PRIOR TO AND AS RCP IS
STARTED
- Standards :**
STATION AN OPERATOR
AT TAP CHANGER AND
COORDINATE VOLTAGE
ADJUSTMENT AS
NECESSARY
- Conditions :**
CUE: OPERATOR IS
STATIONED AT THE TAP
CHANGER (FCR); VOLTAGE
ADJUSTED IN MANUAL TO
THE HIGH END OF NORMAL
RANGE; WHEN STARTING
CURRENT DECAYS BUS
VOLTAGE ADJUSTED TO
NORMAL VALUE OF AT
LEAST 6.9 KV.

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐23 Element :
START 31 RCPStandards :
SELECT }START} ON 31
RCP HANDSWITCH

Conditions :

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐24 Element :
MONITOR EMERGENCY
SHUTDOWN PARAMETERS
LISTED ON IN STEP 2.16
REACTOR COOLANT PUMP
EMERGENCY TRIP CRITERIAStandards :
OBSERVE PARAMETERS
IN STEP 2.16; OBSERVE
STARTING CURRENT (5747)
~~DISSIPATES IN 30~~ 112
~~SECONDS~~
- TRIP RCP

Conditions :

Comments :

Critical Task? ☒ ☒Satisfactory ☐Unsatisfactory ☐25 Element :
ENSURE STATION
AUXILIARY TRANSFORMER
TAP CHANGER IN AUTOStandards :
TAP CHANGER IS IN
AUTO

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

END JPM WHEN RCP TRIPPED

JPM NO. 037

RETURN A POWER RANGE DRAWER TO SERVICE

Job Performance Measure Exam

Submitted By _____

Date _____

Reviewed By _____

Date _____

SME Review/Validation By _____

Date _____

Approved By _____

Date _____

JPM Tasks**Task ID:** 015*002*01*01**Description:** RETURN A POWER RANGE DRAWER TO SERVICE

Trainee: _____ Evaluator: _____

Evaluator Signature _____ Date _____

Trainee Performance: Satisfactory _____ Unsatisfactory _____

Start Time _____ **Stop Time:** _____

When I tell you to begin, you are to perform the task listed above. I will describe general conditions standard(s), initiating cue(s), and answer any questions you have. I will provide access to any tools necessary to perform the task. You may use any approved reference material normally available. To satisfactorily complete this task, you must perform or simulate each critical element correctly. You are to inform the examiner when you have completed the task.

General Comments (For Evaluator Use):

Task Conditions:

POWER RANGE INSTRUMENT N-41 WAS REMOVED FROM SERVICE FOR REPAIR.
REPAIRS ARE COMPLETE AND THE POWER RANGE CHANNEL N-41 IS READY TO BE
RETURNED TO SERVICE.

Task Standards :

POWER RANGE N-41 RETURNED TO SERVICE IN ACCORDANCE WITH SOP-NI-1.

Tools Needed:**Initiating Cues :**

YOU ARE DIRECTED TO PLACE POWER RANGE CHANNEL N-41 BACK IN SERVICE PER
SOP-NI-1, ATTACHMENT 2.

References :

ID	Description	Review Date	Ref Flag
SOP NI-1	EXCORE NUCLEAR INSTRUMENTATION SYSTEM OPERATION	02/05/2001	<input type="checkbox"/>

Safety Considerations :**Consequences of Inadequate Performance:**

INOPERABLE CHANNEL OF REACTOR PROTECTION

Performance Checklist :

- 1 **Element :** OBTAIN SOP-NI-1 AND GO TO ATTACHMENT 2. **Standards :** SOP-NI-1 OBTAINED OPENED TO ATTACHMENT 2 **Conditions :**
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 2 **Element :** ENSURE DROPPED ROD MODE SWITCH IN BYPASS **Standards :** VERIFIED IN BYPASS **Conditions :**
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 3 **Element :** ENSURE ROD STOP BYPASS SWITCH IN BYPASS PR 41 (LOCATED IN MISCELLANEOUS CONTROL AND INDICATION PANEL) **Standards :** VERIFIED IN BYPASS PR 41 **Conditions :** N41 LOCATED ON MISCELLANEOUS CONTROL AND INDICATION PANEL
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 4 **Element :** ENSURE DROPPED ROD PROTECTION BYPASS RELAYS BLOCKED **Standards :** VERIFIED BLOCKED **Conditions :** SEE STEP 18 FOR LOCATION OF RELAYS
- Comments :**
- Critical Task?** ☒ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-

5 Element :
ENSURE DELTA T DEFEAT
SWITCH 3T/411A LOCATED
IN RACK B-8, IN THE
POSITION LISTED BELOW IS
DEFEATED

Standards :
VERIFIED CORRECT
CHANNEL DEFEATED

Conditions :
N-41 3T/411A DFT CH 1

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

6 Element :
ENSURE OVER
TEMPERATURE DELTA T
BISTABLE IN THE TRIP
POSITION

Standards :
VERIFIED BISTABLE IN
TRIP POSITION

Conditions :
N-41 LOOP 1 OT TRIP RACK
A-4, CH.1 (RED)

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

7 Element :
ENSURE POWER MISMATCH
BYPASS SWITCH (LOCATED
ON MISCELLANEOUS
CONTROL AND INDICATION
PANEL) IN BYPASS PR 41

Standards :
VERIFIED IN BYPASS 41

Conditions :
N41 LOCATED ON
MISCELLANEOUS CONTROL
AND INDICATION PANEL

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

8 Element :
ENSURE BOTH THE UPPER
SECTION AND LOWER
SECTION SWITCHES
(LOCATED ON DETECTOR
CURRENT COMPARATOR
DRAWER) IN BYPASS PRN 41

Standards :
VERIFIED BOTH IN
BYPASS PRN 41

Conditions :
N41 LOCATED ON THE
DETECTOR CURRENT
COMPARATOR DRAWER

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

9 Element :
ENSURE COMPARATOR
CHANNEL DEFEAT SWITCH
(LOCATED IN COMPARATOR
AND RATE DRAWER) IN THE
N-41 POSITION

Standards :
SWITCH IN N-41
POSITION

Conditions :
LOCATED ON THE DETECTOR
COMPARATOR DRAWER

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

Element :
PLACE BOTH THE UPPER
AND LOWER DETECTOR
RANGE MILLI-AMPS
SELECTOR SWITCHES FOR
THE AFFECTED CHANNEL IN
POSITION 5, TO SELECT THE
MAXIMUM RANGE OF 0-5
MILLI-AMPS. (PREVENTS
POSSIBLE DAMAGE TO THE
MILLIAMP METER)

Standards :
SWITCH IN POSITION 5

Conditions :

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

11 Element :
ENSURE THE OPERATION
SELECTOR SWITCH FOR THE
AFFECTED CHANNEL IS IN
NORMAL

Standards :
SWITCH IN NORMAL

Conditions :

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

- 12 **Element :**
ENERGIZE THE AFFECTED CHANNEL BY INSTALLING INSTRUMENT AND CONTROL POWER FUSES
- Standards :**
FUSES INSTALLED; NIS POWER RANGE UPPER/LOWER SET HIGH FLUX DEVIATION OR AUTO DEFEAT CLEAR ON SBF-1 WHEN INSTRUMENT POWER FUSES ARE INSTALLED
- Conditions :**
THERE MAY BE A TIME DELAY BEFORE THE ALARMS CLEAR AS THEY ARE COMPUTER GENERATED

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

- 13 **Element :**
VERIFY THE NIS POWER RANGE LOSS OF DETECTOR VOLTAGE ALARM IS CLEAR ON PANEL SBF-1.
- Standards :**
ALARM CLEAR
- Conditions :**

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

- 14 **Element :**
VERIFY THE NIS POWER RANGE SINGLE CHANNEL HIGH RANGE TRIP ALARM IS CLEAR ON PANEL SBF-1
- Standards :**
ALARM CLEAR
- Conditions :**

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

15 Element :
PLACE BOTH THE UPPER
AND LOWER DETECTOR
RANGE MILLI-AMPS
SELECTOR SWITCHES FOR
THE AFFECTED CHANNEL IN
THE DESIRED RANGE
SETTING.

Standards :
SWITCHES RANGED
DOWN AS NEEDED

Conditions :

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

16 Element :
WHEN THE CHANNEL HAS
BEEN ENERGIZED FOR
GREATER THAN 30 MINUTES,
THEN RETURN THE
CHANNEL TO SERVICE

Standards :
SEE STEPS 17 AND 18
BELOW

Conditions :
CUE: 30 MINUTES HAS
ELAPSED

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

17 Element :
MOMENTARILY PLACE THE
DROPPED ROD MODE
SWITCH FOR THE AFFECTED
CHANNEL IN RESET AND
RETURN TO NORMAL

Standards :
DROPPED ROD BYPASS
LAMP EXTINGUISHED;
RUNBACK CHAN N-41
LAMP ON
MISCELLANEOUS
CONTROL AND
INDICATION PANEL
EXTINGUISHED; NIS
POWER RANGE DROPPED
ROD STOP ALARM ON
SBF-1 CLEAR

Conditions :

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

- 18 **Element :**
UNBLOCK THE AFFECTED
DROPPED ROD PROTECTION
BYPASS RELAYS BY
REMOVING THE BLOCKING
STRIP PLACED ACROSS THE
RELAYS, AS LISTED IN THE
TABLE BELOW
- Standards :**
NIS ROD DROP BYPASS
PR 1 LAMP ON PANEL
FBF IS EXTINGUISHED;
NIS TRIP BYPASS ALARM
ON PANEL SBF-1 IS
CLEAR
- Conditions :**
N-41 1/NC41KX RX
PROTECTION CH.1 RACK E2;-
1/NC41KX RX PROTECTION
CH.1 RACK F2

Comments :

Critical Task? ☒

Satisfactory ☐

Unsatisfactory ☐

- 19 **Element :**
ENSURE THE ROD CONTROL
MODE SELECT SWITCH (FCF)
IS IN MAN, TO PREVENT
UNNECESSARY ROD
MOVEMENT WHILE
PERFORMING THE NEXT
STEP.
- Standards :**
SWITCH IN MANUAL
- Conditions :**
RODS MAY ALREADY BE IN
MANUAL

Comments :

Critical Task? ☒

Satisfactory ☐

Unsatisfactory ☐

- 20 **Element :**
PLACE THE APPLICABLE
POWER MISMATCH BYPASS
SWITCH IN OPERATE.
- Standards :**
SWITCH IN OPERATE
- Conditions :**
LOCATED ON THE
MISCELLANEOUS CONTROL
AND INDICATION PANEL

Comments :

Critical Task? ☒

Satisfactory ☐

Unsatisfactory ☐

- Element :**
WHEN A MINIMUM OF TWO
MINUTES HAS ELAPSED,
THEN RETURN THE ROD
CONTROL SYSTEM TO AUTO.
- Standards :**
WAITED TWO MINUTES;
ROD CONTROL
SELECTOR SWITCH
PLACED TO AUTO
- Conditions :**
IF RODS IN MANUAL
PREVIOUSLY, IT IS NOT
NECESSARY TO PLACE THEM
IN AUTO AT THIS TIME; CUE
TWO MINUTES HAS ELAPSED

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

22 Element :
PLACE BOTH THE UPPER
SECTION AND LOWER
SECTION SWITCHES
(LOCATED ON THE
DETECTOR CURRENT
COMPARATOR DRAWER) IN
NORMAL

Standards :
BOTH CHANNEL DEFEAT
LIGHTS ARE
EXTINGUISHED;
SWITCHES IN NORMAL

Conditions :
LOCATED ON
MISCELLANEOUS CONTROL
AND INDICATOR PANEL

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

23 Element :
PLACE THE COMPARATOR
CHANNEL DEFEAT SWITCH
IN NORMAL

Standards :
COMPARATOR DEFEAT
LIGHT IS EXTINGUISHED;
SWITCH IN NORMAL

Conditions :
LOCATED ON THE
COMPARATOR AND RATE
DRAWER

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

24 Element :
PLACE THE APPLICABLE
ROD STOP BYPASS SWITCH
IN OPERATE

Standards :
SWITCH IN OPERATE

Conditions :
LOCATED ON THE
MISCELLANEOUS CONTROL
AND INDICATION PANEL

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

25 **Element :**
RETURN THE
OVERTEMPERATURE
DELTA-T BISTABLE TRIP
SWITCH FOR THE AFFECTED
CHANNEL TO THE OPERATE
POSITION

Standards :
SWITCH IN OPERATE

Conditions :
N-41 LOOP 1 OT TRIP RACK
A-4, CH.1 (RED)

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

26 **Element :**
VERIFY THE FOLLOWING;
BISTABLE PROVING LAMP
EXTINGUISHED; OVERTEMP
DELTA-T CHANNEL TRIP OR
ROD STOP ALARM ON PANEL
SAF CLEARED; BISTABLE
STATUS PANEL LAMP
EXTINGUISHED

Standards :
BISTABLE LAMPS
EXTINGUISHED

Conditions :

Comments :

Critical Task? ☐ N

Satisfactory ☐

Unsatisfactory ☐

27 **Element :**
PLACE THE APPLICABLE
CHANNEL DELTA-T DEFEAT
SWITCH 3T/411A LOCATED
IN RACK B-8, IN NORMAL

Standards :
SWITCH IN NORMAL

Conditions :

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

28 Element :
PLACE THE PRN 41 PERCENT
POWER COMPUT INPUT IN
LIMIT CHECK.

Standards :
PLACE CHANEL BACK
INTO LIMIT CHECK OF
COMPUTER POINT ID
FOR APPLICABLE
CHANNEL.

Conditions :
NOTE: THE COMPUTER
ALARM DELTA FLUX OR ROD
DEVIATION ALARM WILL
CLEAR THIS IS A SIM
DIFFERENCE

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

Terminating Cues :

N-41 RETURNED TO SERVICE.

JPM NO. 057

RECOVER A DROPPED ROD

Job Performance Measure Exam

Submitted By _____

Date _____

Reviewed By _____

Date _____

SME Review/Validation By _____

Date _____

Approved By _____

Date _____

JPM Tasks**Task ID:** 001*004*04*01**Description:** RECOVER A DROPPED ROD

Trainee: _____ Evaluator: _____

Evaluator Signature _____ Date _____

Trainee Performance: Satisfactory _____ Unsatisfactory _____

Start Time _____ Stop Time: _____

When I tell you to begin, you are to perform the task listed above. I will describe general conditions standard(s), initiating cue(s), and answer any questions you have. I will provide access to any tools necessary to perform the task. You may use any approved reference material normally available. To satisfactorily complete this task, you must perform or simulate each critical element correctly. You are to inform the examiner when you have completed the task.

General Comments (For Evaluator Use):

Task Conditions:

THE PLANT WAS AT 100% POWER AT 120 PPM BORON. CONTROL ROD F-2 DROPPED DUE TO A BLOWN FUSE ON THE STATIONARY GRIPPER COIL. I&C HAS COMPLETED THE REPAIRS WITHIN 2 HOURS. ONOP-RC-1 IS COMPLETE TO STEP 5 OF ATTACHMENT 2. POWER HAS BEEN REDUCED IN RESPONSE TO THE DROPPED ROD.

Task Standards :

ONOP-RC-1, ATTACHMENT 2 STEP 6 THROUGH STEP 13F.

Tools Needed:**Initiating Cues :**

YOU ARE DIRECTED TO REALIGN ROD F-2. PER ONOP-RC-1 ATTACHMENT 2 STEP 6.0 THROUGH 13F.

References :

ID	Description	Review Date	Ref Flag
ONOP RC-1	DROPPED OR MISALIGNED ROD(S)		<input checked="" type="checkbox"/>

Safety Considerations :

N/A

Consequences of Inadequate Performance:

Performance Checklist :

- | | | | |
|-------|---|--|--|
| 1 | Element :
PLACE THE ROD CONTROL
MODE SELECTOR SWITCH IN
THE BANK POSITION
CONTAINING THE DROPPED
ROD. | Standards :
BANK SELECTOR
SWITCH IN CONTROL
BANK D POSITION. | Conditions : |
| | Comments : | | |
| | Critical Task? <input checked="checked" type="checkbox"/> Y | | |
| | Satisfactory <input type="checkbox"/> | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| 2 | Element :
OPEN THE LIFT COIL
DISCONNECT SWITCHES OF
ALL THE UNAFFECTED RCC
ASSEMBLIES WITHIN THE
AFFECTED BANK. | Standards :
LIFT COIL DISCONNECT
SWITCHES FOR
CONTROL BANK D ALL
OPEN EXCEPT ROD F-2. | Conditions : |
| | Comments : | | |
| | Critical Task? <input checked="checked" type="checkbox"/> Y | | |
| | Satisfactory <input type="checkbox"/> | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| 3 | Element :
NOTE THE POSITION OF
BANK D GROUP 1 STEP
COUNTER AND P/A
CONVERTER. | Standards :
CONTROL BANK D
GROUP 1 STEP COUNTER
AND P/A CONVERTER
VALUE NOTED. | Conditions : |
| | Comments : | | |
| | Critical Task? <input checked="checked" type="checkbox"/> Y | | |
| | Satisfactory <input type="checkbox"/> | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| | Element :
MANUALLY RESET THE
GROUP I STEP COUNTER TO
ZERO. | Standards :
CONTROL BANK D
GROUP 1 STEP COUNTER
SET TO ZERO. | Conditions :
ROD RECOVERY IS WITHIN 4
HOURS OF RECOVERY |

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

Element :

5 VERIFY ELAPSED TIME
SINCE THE DROP ROD IS
LESS THAN 4 HOURS OBTAIN
CRS/SM PERMISSION TO
WITHDRAW ROD F-2.

Standards :

TIME IS ONE HOUR

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

Element :

MANUALLY ATTEMPT TO
WITHDRAW THE AFFECTED
ROD TO THE DEMAND
GROUP POSITION, AT
NORMAL ROD SPEED NOTED
IN STEP ABOVE.

Standards :

ROD F-2 WITHDRAWN TO
THE NOTED POSITION.;
VERIFY ROD
ADJUSTMENT IS
SUCCESSFUL..

Conditions :

Comments :

NOTE 2nd Rod
Drops at 80
steps. TAP Rx

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

Element :

7 RESET THE AFFECTED
GROUP P/A CONVERTER TO
THE PREVIOUSLY NOTED
VALUE.

Standards :

CONTROL BANK D P/A
CONVERTER SET TO
NOTED VALUE.

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

END JPM

Terminating Cues :

ROD F-2 IS RE-ALIGNED TO ITS BANK AND ONOP-RC-1, ATTACHMENT 2 IS COMPLETED THROUGH STEP 13F).

.JPM NO. 059

REALIGN THE SI SYSTEM FOR HOT LEG INJECTION

.Job Performance Measure Exam

Submitted By _____

Date _____

Reviewed By _____

Date _____

SME Review/Validation By _____

Date _____

Approved By _____

Date _____

JPM Tasks**Task ID:** 013*018*05*01**Description:** REALIGN THE SI SYSTEM FOR HOT LEG INJECTION

Trainee: _____ Evaluator: _____

Evaluator Signature _____ Date _____

Trainee Performance: Satisfactory _____ Unsatisfactory _____

Start Time _____ Stop Time: _____

When I tell you to begin, you are to perform the task listed above. I will describe general conditions standard(s), initiating cue(s), and answer any questions you have. I will provide access to any tools necessary to perform the task. You may use any approved reference material normally available. To satisfactorily complete this task, you must perform or simulate each critical element correctly. You are to inform the examiner when you have completed the task.

General Comments (For Evaluator Use):

Task Conditions:

IT IS 14 HOURS AFTER A LARGE BREAK LOCA AND TRANSFER TO HOT LEG RECIRC IS DESIRED.

Task Standards :

SI SYSTEM ALIGNED FOR HOT LEG RECIRC IN ACCORDANCE WITH ES-1.4

Tools Needed:**Initiating Cues :**

YOU ARE DIRECTED TO TRANSFER TO HOT LEG RECIRC

References :

ID	Description	Review Date	Ref Flag
EOP ES-1.4	TRANSFER TO HOT LEG RECIRCULATION		<input checked="" type="checkbox"/>

Safety Considerations :**Consequences of Inadequate Performance:**

Performance Checklist :

- | | | | |
|--|---|--|---|
| 1 | Element :
OBTAIN & REVIEW ES-1.4 | Standards :
CANDIDATE REVIEWED
ES-1.4 | Conditions :
* STEPS INDICATE EOP HIGH
LEVEL STEPS |
| Comments : | | | |
| Critical Task? <input type="checkbox"/> N | | | |
| Satisfactory <input type="checkbox"/> | | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| 2 | Element :
* ALIGN SI SYSTEM AS
FOLLOWS | Standards :
SEE STEPS 3, 4,5 BELOW | Conditions : |
| Comments : | | | |
| Critical Task? <input type="checkbox"/> N | | | |
| Satisfactory <input type="checkbox"/> | | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| 3 | Element :
CHECK 32 HHSI PUMP
STOPPED | Standards :
OBSERVE GREEN LIGHT
ON RED LIGHT OFF | Conditions : |
| Comments : | | | |
| Critical Task? <input type="checkbox"/> N | | | |
| Satisfactory <input type="checkbox"/> | | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| 4 | Element :
CHECK VALVE SI-846 (RWST
OUTLET) CLOSED | Standards :
DISPATCH NPO TO
VERIFY VALVE POSITION | Conditions :
CUE: NPO REPORTS VALVE
CLOSED |
| Comments : | | | |
| Critical Task? <input type="checkbox"/> N | | | |
| Satisfactory <input type="checkbox"/> | | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| 5 | Element :
CHECK VALVE SI 898 OPEN,
32 SAFETY INJECTION PUMP
SECTION BYPASS LINE
ISOLATION (SI PUMP ROOM) | Standards :
DISPATCH NPO TO
VERIFY VALVE POSITION | Conditions :
CUE: NPO REPORTS VALVE
OPEN |

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

6 Element :
* CHECK LOW-HEAD
RECIRCULATION IN
PROGRESS

Standards :
CHECK FLOW
INDICATED ON FI-638
(LOOP 31) AND/OR FI-640
(LOOP 32)

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

Element :
* LOCALLY ENERGIZE
VALVE CONTROL CIRCUITS
FOR HOT LEG INJECTION
LINE VALVES SI-MOV-856B
AT MCC-36B AND
SI-MOV-856G AT MCC-36A

Standards :
OBSERVE VALVES
ENERGIZED

Conditions :
THESE VALVES ENERGIZED
FROM STEP 53 OF ES-1.3

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

8 Element :
* ALIGN NON-BIT HOT
LEG-INJECTION VALVES

Standards :
CLOSE 856J AND 856H -
GREEN LIGHTS ON RED
LIGHTS OFF; OPEN 856B -
RED LIGHT LIT GREEN
LIGHT OFF

Conditions :

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

- 9 **Element :**
* ALIGN BIT HOT LEG
INJECTION VALVES
- Standards :**
CLOSE 856E AND 856C -
GREEN LIGHTS ON RED
LIGHTS OFF; OPEN 856G -
RED LIGHT LIT GREEN
LIGHT OFF
- Conditions :**
- Comments :**
- Critical Task?** ☒ Y
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 10 **Element :**
* CHECK HOT LEG
INJECTION VALVES - OPEN
- Standards :**
OBSERVE 856B AND OR
856G OPEN
- Conditions :**
OPENED IN PREVIOUS STEPS
- Comments :**
- Critical Task?** ☐ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 11 **Element :**
* PREPARE FOR HIGH-HEAD
RECIRCULATION
- Standards :**
SEE STEPS 12 THROUGH
18 BELOW
- Conditions :**
- Comments :**
- Critical Task?** ☐ N
- Satisfactory** ☐ **Unsatisfactory** ☐
-
- 12 **Element :**
DISPATCH NPO TO CLOSE
IVSW VALVES IA-1403, 1479,
1464, 1477, 1448 (PAB, 41 FT.,
IVSW RACK), AND ENSURE SI
VALVES 850A AND 850C ARE
OPEN (PAB, 55 FT, WASTE
DISPOSAL/BORON RECYCLE
PANEL)
- Standards :**
NPO DISPATCHED
- Conditions :**
CUE: NPO ACKNOWLEDGES

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

- 13 Element :
OPEN LOW-HEAD TO HIGH
HEAD VALVES 888A AND
888B

Standards :
VALVES OPENED - RED
LIGHTS ON AND GREEN
LIGHTS OFF

Conditions :

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

- 14 Element :
CHECK OPEN 1869A AND
1869B

Standards :
VALVES CHECKED RED
LIGHTS ON AND GREEN
LIGHTS OFF

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

- 15 Element :
CHECK OPEN 1835A, 1835B,
1852A AND 1852B

Standards :
VALVES CHECKED RED
LIGHTS ON AND GREEN
LIGHTS OFF

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

- 16 Element :
PLACE SI PUMP SUCTION
LOW PRESSURE ALARM
BLOCK SWITCH TO
UNBLOCK POSITION

Standards :
BLOCK SWITCH TO
UNBLOCK POSITION

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

17 Element :
CHECK SI PUMP SUCTION
LOW PRESSURE ALARM -
CLEAR ON PANEL SBF-1

Standards :
CHECK ALARM CLEAR

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

18 Element :
PLACE SAFETY INJECTION
RECIRC SWITCH 6 LO HEAD
TO OFF POSITION

Standards :
RECIRC SAFETY
INJECTION SWITCH 6 LO
HEAD IS IN OFF POSITION

Conditions :

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

19 Element :
* INITIATE RECIRCULATION
WITH 31 HHSI PUMP

Standards :
START PUMP - RED
LIGHT ON AND GREEN
LIGHT OFF

Conditions :

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

20 Element :
CHECK NON-BIT HEADER
LOOP INJECTION FLOWS -
INDICATING AND STABLE

Standards :
OBSERVE FI-926, 981, 980
AND 982

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

21 Element :
* INITIATE RECIRCULATION
WITH 33 HHSI PUMP

Standards :
START HHSI PUMP 33-
RED LIGHT ON AND
GREEN LIGHT OFF

Conditions :

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

22 Element :
CHECK BIT HEADER LOOP
INJECTION FLOWS -
INDICATING AND STABLE

Standards :
OBSERVE FI-924A, 925,
926A AND 927

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

23 Element :
* CHECK HIGH-HEAD
RECIRCULATION STATUS

Standards :
SEE STEPS 24 THROUGH
27 BELOW

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

24 Element :
CHECK ANY HHSI PUMP
RUNNING

Standards :
OBSERVE 31 AND 33
PUMPS RUNNING

Conditions :
31 AND 33 HHSI PUMPS
STARTED IN PREVIOUS STEPS

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

25 Element :
CHECK 31 AND 33 HHSI
PUMPS RUNNING

Standards :
OBSERVE 31 AND 33
PUMPS RUNNING

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

26 Element :
CHECK 32 HHSI PUMP -
SHUTDOWN

Standards :
OBSERVE RED LIGHT
OFF AND GREEN LIGHT
ON; 32 HHSI PUMP
CONTROL SWITCH
PLACED IN TRIP
PULLOUT

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

27 Element :
CHECK HIGH-HEAD LOOP
INJECTION FLOWS TO AT
LEAST ONE HEADER -
ESTABLISHED

Standards :
OBSERVE FLOW
INDICATORS AS IN STEPS
20 AND 22 - FLOW
OBSERVED

Conditions :

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

28 Element :
* TERMINATE LOW-HEAD
RECIRCULATION

Standards :
CLOSE 746 AND 747 -
GREEN LIGHTS LIT RED
LIGHTS OFF;CLOSE 899A
AND 899B - GREEN
LIGHTS LIT RED LIGHTS
OFF

Conditions :

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

29 Element :
* DISPATCH NPO TO
DE-ENERGIZE VALVES: 856G,
856E, 856C, (MCC-36A); 856J,
856H, 856B, MCC-36B)

Standards :
NPO DIRECTED TO
DE-ENERGIZE VALVES

Conditions :
CUE: NPO ACKNOWLEDGES
DIRECTION

Comments :

Critical Task? ☐ N

Satisfactory ☐

Unsatisfactory ☐

30 Element :
* RETURN TO PROCEDURE
AND STEP IN EFFECT

Standards :

Conditions :
THIS COMPLETES THE JPM

Comments :

Critical Task? ☐ N

Satisfactory ☐

Unsatisfactory ☐

Terminating Cues :

ES-1.4 COMPLETED

NRC NEW JPM 6 - establish letdown IAW E-3 att 2

Initial conditions:

A SGTR has occurred in 31 SG. E-3 has been performed through step 27, which means that the RCS has been cooled down and depressurized below ruptured SG pressure, and SI has been terminated.

Initiating cue.

The CRS has directed you to establish letdown IAW E-3 attachment 2.

START JPM TIME : _____

Performance checklist:

E-3 attachment 2 with critical steps marked:

END JPM TIME: _____

Number: E-3	Title: STEAM GENERATOR TUBE RUPTURE	Revision Number: 13
----------------	--	------------------------

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

ATTACHMENT 2
ESTABLISHING LETDOWN

(Attachment page 1 of 6)

NOTE

LETDOWN SHOULD NOT BE PLACED IN SERVICE UNLESS CHARGING AND CCW HAVE BEEN ESTABLISHED.

1. DETERMINE If Letdown Can Be Established:

- CHECK charging - ESTABLISHED
- CHECK CCW - ESTABLISHED

PERFORM the following:

- a. WHEN charging AND CCW are established, THEN CONTINUE performance of this attachment.
- b. RETURN To Procedure Section, Step 28, Page 31.

- (C) 2. PREPARE PCV-135, Low Pressure Letdown Line, For Service:

- a. PLACE PCV-135 in MAN
- b. ADJUST PCV-135 controller to approximately 35% Open

- (C) 3. PREPARE TCV-130, Non Rgn Hx Ltdn Outlet Temp., For Service:

- a. PLACE TCV-130 - IN MAN
- b. Slowly ADJUST TCV-130 controller to approximately 30% Open

Number: E-3	Title: STEAM GENERATOR TUBE RUPTURE	Revision Number: 13
----------------	--	------------------------

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
------	--------------------------	-----------------------

ATTACHMENT 2
ESTABLISHING LETDOWN

(Attachment page 2 of 6)

4. CHECK The Following Valves -
IN AUTO

PLACE valve(s) in AUTO.

- CH-TCV-149, CVCS
Demineralizers Hi Temp
Diversion
- CH-LCV-112A, VCT Inlet
Diversion

5. PREPARE To Establish Letdown
Flow:

- a. CHECK Letdown Isolation
valves - OPEN

a. OPEN Letdown Isolation
valve(s).

- CH-AOV-201
- CH-AOV-202

- (c) b. OPEN letdown to CVCS
isolation valves then PLACE
in AUTO:

- 459
- 460

Number: E-3	Title: STEAM GENERATOR TUBE RUPTURE	Revision Number: 13
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

ATTACHMENT 2
ESTABLISHING LETDOWN

(Attachment page 3 of 6)

6. ESTABLISH Desired Letdown Flowrate:

a. CONTROL charging to prevent flashing as follows:

LETDOWN FLOWRATE (GPM)	MINIMUM CHARGING LINE FLOWRATE (GPM)
45	18
75	38
120	69

(c) b. OPEN desired letdown orifice isolation valve(s):

- 200A
- 200B
- 200C

Number: E-3	Title: STEAM GENERATOR TUBE RUPTURE	Revision Number: 13
----------------	--	------------------------

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
------	--------------------------	-----------------------

ATTACHMENT 2
ESTABLISHING LETDOWN

(Attachment page 4 of 6)

7. MONITOR Letdown Status:

a. CHECK letdown flow -
ESTABLISHED

a. ESTABLISH excess letdown
operations per SOP-CVCS-2.

- FI-134, GPM Letdown Flow

b. PLACE the following
controllers in AUTO, if
desired:

- PCV-135, Low Pressure
Letdown Line
- TCV-130, Non Rgn Hx Ltdn
Outlet Temp.

c. CONTROL charging and
letdown to maintain minimum
seal injection and PRZR
level GREATER THAN 29% [47%]

Number: E-3	Title: STEAM GENERATOR TUBE RUPTURE	Revision Number: 13
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
------	--------------------------	-----------------------

ATTACHMENT 2
ESTABLISHING LETDOWN

(Attachment page 5 of 6)

CAUTION

IF RCDT PRESSURE IS GREATER THAN VCT PRESSURE, THEN OPENING CH-MOV-222 COULD CAUSE NUMBER 2 SEAL TO OPEN UP AND REVERSE FLOW COULD DAMAGE SEAL.

8. CHECK CH-MOV-222 - OPEN

PERFORM the following:

- a. DISPATCH NPO to determine RCDT pressure:
 - 3PI-1004, Reactor Coolant Drain Tank Pressure (Waste Disposal Panel)
- b. IF RCDT pressure is greater than VCT pressure, THEN PERFORM any of the following:
 - REDUCE RCDT pressure below VCT pressure using SOP-WDS-1, Liquid Waste Disposal System Operation.
 - INCREASE VCT pressure above RCDT pressure using SOP-CVCS-2, CHARGING, SEAL WATER AND LETDOWN CONTROL.
- c. WHEN RCDT pressure is less than VCT pressure, THEN OPEN CH-MOV-222.

Number: E-3	Title: STEAM GENERATOR TUBE RUPTURE	Revision Number: 13
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

ATTACHMENT 2
ESTABLISHING LETDOWN

(Attachment page 6 of 6)

9. RETURN To Procedure Section,
Step 28, Page 31

-END OF ATTACHMENT-

NRC NEW JPM - establish letdown IAW E-3 att 2

Initial conditions:

A SGTR has occurred in 31 SG. E-3 has been performed through step 27, which means that the RCS has been cooled down and depressurized below ruptured SG pressure, and SI has been terminated.

Initiating cue.

The CRS has directed you to establish letdown IAW E-3 attachment 2.

LOSS OF MAIN FEED & TURB TRIP BELOW P-8

GENERAL CONDITIONS

Plant startup is in progress per POP 1.3, which is complete up to step 4.33, "perform turbine startup". SOP-TG-4 complete up to step 4.1.24, "latch turbine". The plant is at 6% power with steam dumps in auto. Both MBFPs are in operation. An instructor is available to act as a second operator and all field personnel you need are stationed. The examiner will act as CRS.

Reactivity Brief:

Provide the following information:

INITIATING CUE

Raise steam generator levels to 50%, then we will sync to the grid.

START TIME: _____

PERFORMANCE CHECKLIST

SAT UNSAT

(C) Raise SG level

STANDARDS

Begins raising SG level

NOTE FOR EXAMINER:

WHEN LEVEL REACHES 50% IN AT LEAST ONE SG, MBFPs
WILL TRIP. WHEN APPLICANT REPORTS LOSS OF MBFPs,
EXAMINER PROVIDE THE FOLLOWINGCUE:

AUX FEED PUMPS HAVE STARTED. TRIP THE TURBINE
AND REDUCE POWER TO 4%.

(C) PERFORM INITIAL ACTIONS OF ONOP-FW-1

STANDARDS

INSERT RODS TO REDUCE POWER. STABILZE PLANT
WITHOUT TRIPPING. MAINTAIN STEAM PRESSURE NO
HIGHER THAN ASDV SETPOINT, MAINTAIN Tave > 540 DEG F

COMPLETION TIME: _____

GENERAL CONDITIONS

Plant startup is in progress per POP 1.3, which is complete up to step 4.33, "perform turbine startup". SOP-TG-4 complete up to step 4.1.24, "latch turbine". The plant is at 6% power with steam dumps in auto. Both MBFPs are in operation. An instructor is available to act as a second operator and all field personnel you need are stationed. The examiner will act as CRS.

IC 19

Reactivity Brief:

Provide the following information:

INITIATING CUE

Raise steam generator levels to 50%, then we will sync to the grid.

JPM NO. 027

LOCALLY EMERGENCY BORATE

Job Performance Measure Exam

Submitted By _____

Date _____

Reviewed By _____

Date _____

SME Review/Validation By _____

Date _____

Approved By _____

Date _____

JPM Tasks**Task ID:** 004*001*05*04**Description:** LOCALLY EMERGENCY BORATE

Trainee: _____ Evaluator: _____

Evaluator Signature _____ Date _____

Trainee Performance: Satisfactory _____ Unsatisfactory _____

Start Time _____ Stop Time: _____

When I tell you to begin, you are to perform the task listed above. I will describe general conditions standard(s), initiating cue(s), and answer any questions you have. I will provide access to any tools necessary to perform the task. You may use any approved reference material normally available. To satisfactory complete this task, you must perform or simulate each critical element correctly. You are to inform the examiner when you have completed the task.

General Comments (For Evaluator Use):

Task Conditions:

THE CCR HAS BEEN EVACUATED DUE TO A FIRE. SOURCE RANGE COUNT RATE HAS NOT COME ON SCALE AS EXPECTED. MCC-36A IS ENERGIZED AND MCC-36B IS DEENERGIZED.

Task Standards :

LOCALLY EMERGENCY BORATE IN ACCORDANCE WITH ONOP*FP-1A, ATTACHMENT 12

Tools Needed:**Initiating Cues :**

YOU ARE DIRECTED TO LOCALLY EMERGENCY BORATE PER ONOP-FP-1A, ATTACHMENT 12.

References :

ID		Description	Review Date	Ref Flag
AP	52	REACTIVITY CONTROL AND MANAGEMENT		<input type="checkbox"/>
ONOP	FP-1A	SAFE SHUTDOWN FROM OUTSIDE THE CONTROL ROOM		<input type="checkbox"/>

Safety Considerations :

OBSERVE RWP

Consequences of Inadequate Performance:

INABILITY TO MAINTAIN REACTOR SHUTDOWN MARGIN

Performance Checklist :

- 1 **Element :**
ALIGN ONE BORIC ACID
TRANSFER PUMP TO SUPPLY
BLENDER
- Standards :**
VERIFY CH-360 OPEN, 31
BORIC ACID TRANSFER
PUMP DISCHARGE TO 31
BORIC ACID FILTER;
SHUT CH-370, 32 BORIC
ACID TRANSFER PUMP
DISCHARGE ISOLATION
TO 31 BORIC ACID
FILTER; VERIFY 31 BORIC
ACID TRANSFER PUMP IS
ENERGIZED AT MCC-36A
- Conditions :**
OPERATOR MUST CHOOSE 31
BORIC ACID TRANSFER
PUMP; CUE: HANDWHEEL
FOR CH-360 STOPS ROTATING
IN THE COUNTER
CLOCKWISE DIRECTION; CUE:
HANDWHEEL FOR CH-370
STOPS ROTATING IN THE
CLOCKWISE DIRECTION; CUE:
BREAKER CLOSED ON
MCC-36A

Comments :**Critical Task?**☒

Satisfactory

☐

Unsatisfactory

☐

- 2 **Element :**
CLOSE CH-HCV-104 AND 105
- Standards :**
CLOSE VALVES BY ANY
LOCAL MEANS
- Conditions :**
OPERATOR MUST
DEMONSTRATE THAT
VALVES CLOSE; CUE:
VALVES HAVE CLOSED

Comments :**Critical Task?**☒

Satisfactory

☐

Unsatisfactory

☐

- 3 **Element :**
DEPRESS THE CLUTCH
LEVER ON CH-MOV-333
- Standards :**
DEPRESS THE CLUTCH
LEVER ON THE MOV
- Conditions :**
CUE: CLUTCH LEVER IS
DEPRESSED

Comments :**Critical Task?**☒

Satisfactory

☐

Unsatisfactory

☐

4 **Element :**
ENGAGE CLUTCH BY
MOVING THE VALVE
HANDWHEEL

Standards :
MOVE THE VALVE
HANDWHEEL
COUNTER-CLOCKWISE
UNTIL CLUTCH IS
ENGAGED

Conditions :
CUE: CLUTCH IS ENGAGED

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

5 **Element :**
RELEASE THE CLUTCH

Standards :
RELEASE THE CLUTCH
LEVER

Conditions :
CUE: LEVER IS RELEASED

Comments :

Critical Task? ☐ N

Satisfactory ☐

Unsatisfactory ☐

6 **Element :**
OPEN CH-MOV-333 BY
ROTATING THE
HANDWHEEL
COUNTER-CLOCKWISE

Standards :
ROTATE THE
HANDWHEEL
COUNTER-CLOCKWISE
UNTIL IT STOPS
TURNING

Conditions :
CUE: HANDWHEEL STOPS
TURNING IN THE
COUNTER-CLOCKWISE
DIRECTION

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

7 **Element :**
TRANSFER CONTROL OF 31
BORIC ACID TRANSFER
PUMP TO "LOCAL"

Standards :
TAKE HAND SWITCH
FOR 31 BORIC ACID
TRANSFER PUMP TO
LOCAL

Conditions :
CUE: PUMP 31 CONTROL
SWITCH IS IN LOCAL

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

8 **Element :**
START 31 BORIC ACID PUMP
IN FAST SPEED

Standards :
SELECT "FAST" FOR THE
31 BORIC ACID
TRANSFER PUMP

Conditions :
CUE: THE SWITCH IS IN
"FAST" AND THE RED "FAST"
LIGHT IS LIT FOR 31 BORIC
ACID TRANSFER PUMP; CUE:
WHEN OPERATOR OPENS
CHARGING PUMP SPEED
CONTROL PANEL TO ADJUST
SPEED, INFORM HIM THAT
"MAN" IS SELECTED ON 31
CHARGING PUMP SPEED
CONTROLLER.

Comments :

Critical Task? ☒

Satisfactory ☐

Unsatisfactory ☐

Element :
DISPATCH NUCLEAR NPO TO
MONITOR RCP SEAL
INJECTION FLOW (PAB, 41 FT,
LOCKED PENETRATION
AREA).

Standards :
NUCLEAR NPO
DISPATCHED TO READ
LOCAL SEAL INJECTION
FLOW INDICATIONS

Conditions :
CUE: ALL LOCAL SEAL FLOW
INDICATORS READ BETWEEN
6 & 7 GPM.

Comments :

Critical Task? ☐

Satisfactory ☐

Unsatisfactory ☐

10 **Element :**
INCREASE RCP SEAL
INJECTION OF EACH RCP TO
12 GPM BY INCREASING
CHARGING PUMP SPEED

Standards :
INCREASE CHARGING
PUMP SPEED TO
MAINTAIN RCP SEAL
INJECTION

Conditions :
CUE: TOTAL CHARGING
FLOW IS 45 GPM AT
CHARGING PUMP SPEED
CONTROL PANEL; SEAL
INJECTION FLOW IS
INDICATING
APPROXIMATELY 12 GPM PER
RCP.

Comments :

Critical Task? ☒

Satisfactory ☐

Unsatisfactory ☐

11 **Element :** CONTINUE BORATION FOR GREATER THAN 35 MINUTES
Standards : BORATION CONTINUED FOR GREATER THAN 35 MINUTES
Conditions : CUE: 35 MINUTES HAVE ELAPSED

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

12 **Element :** SECURE 31 BAT PUMP
Standards : PLACE 31 BAT PUMP SPEED SWITCH IN "STOP"
Conditions : CUE: 31 BAT PUMP IS STOPPED

Comments :

Critical Task? ☐ N

Satisfactory ☐

Unsatisfactory ☐

13 **Element :** INFORM EVALUATOR JPM IS COMPLETE
Standards : INFORMED EVALUATOR JPM IS COMPLETE
Conditions : CUE: JPM IS COMPLETE

Comments :

Critical Task? ☐ N

Satisfactory ☐

Unsatisfactory ☐

Terminating Cues :

LOCAL EMERGENCY BORATION PERFORMED PER ONOP-FP-1A

JPM NO. 004

ALIGN CITY WATER TO 31 RHR PUMP

Job Performance Measure Exam

Submitted By _____

Date _____

Reviewed By _____

Date _____

SME Review/Validation By _____

Date _____

Approved By _____

Date _____

JPM Tasks**Task ID:** 005*001*04*04**Description:** ALIGN CITY WATER TO 31 RHR PUMP

Trainee: _____ Evaluator: _____

Evaluator Signature _____ Date _____

Trainee Performance: Satisfactory _____ Unsatisfactory _____

Start Time _____ **Stop Time:** _____

When I tell you to begin, you are to perform the task listed above. I will describe general conditions standard(s), initiating cue(s), and answer any questions you have. I will provide access to any tools necessary to perform the task. You may use any approved reference material normally available. To satisfactorily complete this task, you must perform or simulate each critical element correctly. You are to inform the examiner when you have completed the task.

General Comments (For Evaluator Use):

Task Conditions:

UNIT TRIP HAS OCCURRED WITH A LOSS OF OUTSIDE POWER

CCR HAS PLACED ALL CCW PUMPS IN TRIP PULL-OUT(NOT AVAILABLE) AS REQUIRED
PREPARATION ARE BEING MADE TO BRING THE PLANT TO COLD SHUTDOWN

Task Standards :

SOP*ESP-1

Tools Needed:

ADJUSTABLE WRENCH
FLASHLIGHT

Initiating Cues :

YOU ARE DIRECTED BY THE CR TO ALIGN CITY WATER TO #31 RHR PUMP

References :

ID	Description	Review Date	Ref Flag
SOP ESP-1	LOCAL OPERATION OF SAFE SHUTDOWN EQUIPMENT		<input type="checkbox"/>

Safety Considerations :

OBSERVE RWP:RADIOLOGICAL HAZARDS CAN EXIST AT 31 RHR PUMP AND ITS
ASSOCIATED SYSTEMS

Consequences of Inadequate Performance:

31 RHR PUMP DAMAGE OR POSSIBLE FAILURE
OVERHEATING OF PUMP AFTER 24 HOUR PERIOD

Performance Checklist :

- | | | | |
|---|--|--|---|
| 1 | Element :
OBTAIN AND REVIEW
SOP-ESP-1 | Standards :
OBTAIN AND REVIEW A
CONTROLLED COPY OF
PROCEDURE | Conditions :
ONLY 31# RHR PUMP IS
CAPABLE OF BEING SUPPLIED
WITH CITY WATER |
| Comments : | | | |
| Critical Task? <input checked="" type="checkbox"/> N | | | |
| Satisfactory <input type="checkbox"/> | | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| 2 | Element :
CLOSE AC-736A, CC SUPPLY
TO 31 RHR THERMAL
BARRIER INLET ISOLATION | Standards :
LOCKING SCREWS
EITHER REMOVED OR
BACKED OUT; ROTATE
VALVE CLOCKWISE
UNTIL CLOSED | Conditions :
CUE: LOCKING SCREWS ARE
BACKED OUT; CUE: VALVE
STOPPED ROTATING
CLOCKWISE |
| Comments : | | | |
| Critical Task? <input type="checkbox"/> Y | | | |
| Satisfactory <input type="checkbox"/> | | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| 3 | Element :
CLOSE AC-737A CC RETURN
FROM 31 RHR PUMP
THERMAL BARRIER AND
SEAL HX OUTLET
ISOLATION. | Standards :
ROTATE VALVE
CLOCKWISE UNTIL
CLOSED | Conditions :
CUE: VALVE STOPPED
ROTATING CLOCKWISE |
| Comments : | | | |
| Critical Task? <input checked="" type="checkbox"/> Y | | | |
| Satisfactory <input type="checkbox"/> | | Unsatisfactory <input type="checkbox"/> | |
| <hr/> | | | |
| 4 | Element :
CLOSE AC-1871D, CC SUPPLY
TO 31 RHR PUMP SEAL HX
INLET ISOLATION | Standards :
ROTATE VALVE
CLOCKWISE UNTIL
CLOSED | Conditions :
CUE: VALVE STOPPED
ROTATING CLOCKWISE |

Comments :

Critical Task? ☒Satisfactory ☐Unsatisfactory ☐

- 5 Element :
INSTALL THE EMERGENCY
CITY WATER SUPPLY
JUMPER (E.G. HOSE)
BETWEEN MW-18-16 HOSE
CONNECTION ISOLATION
(LOCATED ACROSS FROM
FILTER ROOM ON COLUMN)
AND ONE INCH TEE
LOCATED IMMEDIATELY
DOWNSTREAM OF AC-736A,
CC SUPPLY TO 31 RHR PUMP
THERMAL BARRIER INLET
ISOLATION

Standards :
INSTALL THE
EMERG.CITY WATER
SUPPLY JUMPER
BETWEEN THE CITY
WATER SUPPLY AND
THE RHR TIE

Conditions :
EMERGENCY CITY WATER
SUPPLY JUMPERS ARE
LOCATED 31 RHR PUMP
CELL;CUE: JUMPER IS
CONNECTED

Comments :

Critical Task? ☒Satisfactory ☐Unsatisfactory ☐

- 6 Element :
INSTALL THE DRAIN HOSE
(E.G. HOSE) ON THE 3/4" TEE
LOCATED IMMEDIATELY
DOWN STREAM OF
AC-1871D, CC SUPPLY TO 31
RHR PUMP SEAL HX INLET
ISOLATION (31 RHR PUMP
ROOM)

Standards :
INSTALL THE DRAIN
HOSE TO THE RHR
DRAIN TEE CONNECTION

Conditions :
EMERGENCY CITY WATER
DRAIN HOSE CONNECTION IS
LOCATED IN 31 RHR PUMP
CELL;CUE: DRAIN HOSE IS
CONNECTED

Comments :

Critical Task? ☒Satisfactory ☐Unsatisfactory ☐

7 **Element :**
ROUTE DRAIN HOSE TO A
SUITABLE DRAIN (31 RHR
PUMP FLOOR DRAIN).

Standards :
DRAIN HOSE IS ROUTED
TO RHR FLOOR DRAIN.

Conditions :
CUE: DRAIN HOSE IS
ROUTED.

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

8 **Element :**
OPEN AC-1871C, CC RETURN
FROM 31 RHR PUMP SEAL HX
OUTLET ISOLATION (31 RHR
PUMP ROOM).

Standards :
LOCKING SCREWS
EITHER REMOVED OR
BACKED OUT; ROTATE
VALVE COUNTER
CLOCKWISE UNTIL
OPENED

Conditions :
CUE: LOCKING SCREWS ARE
BACKED OUT; CUE: VALVE
STOPPED ROTATING
COUNTER CLOCKWISE

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

9 **Element :**
OPEN MW-18-16 HOSE
CONNECTION ISOLATION.
(ACROSS FROM FILTER
ROOM ON COLUMN).

Standards :
ROTATE VALVE
COUNTER CLOCKWISE
UNTIL OPENED

Conditions :
CUE: VALVE STOPPED
ROTATING COUNTER
CLOCKWISE

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

10 **Element :**
OPERATOR INFORMS CR
THAT CITY WATER IS
ALIGNED AND DRAINING TO
THE FLOOR

Standards :
INFORM CCR THAT CITY
WATER IS SUPPLIED TO
31 RHR PUMP; CCW IS
ISOLATED; THE JPM IS
COMPLETED

Conditions :
CUE: ACKNOWLEDGE
REPORT

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

Terminating Cues :

CITY WATER IS THROTTLED AND DRAINING TO THE FLOOR

JPM NO. 012

**LOCALLY START A 480 VOLT EMERGENCY DIESEL
GENERATOR**

.Job Performance Measure Exam

Submitted By _____

Date _____

Reviewed By _____

Date _____

SME Review/Validation By _____

Date _____

Approved By _____

Date _____

JPM Tasks**Task ID:** 064*003*01*04**Description:** LOCALLY START A 480 VOLT
EMERGENCY DIESEL GENERATOR

Trainee: _____ Evaluator: _____

Evaluator Signature _____ Date _____

Trainee Performance: Satisfactory _____ Unsatisfactory _____

Start Time _____ Stop Time: _____

When I tell you to begin, you are to perform the task listed above. I will describe general conditions standard(s), initiating cue(s), and answer any questions you have. I will provide access to any tools necessary to perform the task. You may use any approved reference material normally available. To satisfactorily complete this task, you must perform or simulate each critical element correctly. You are to inform the examiner when you have completed the task.

General Comments (For Evaluator Use):

Task Conditions:

THE PRE-START CHECKLIST HAS BEEN COMPLETED FOR 31 (32 OR 33) EDG.

31 (32 OR 33) EDG IS INOPERABLE AND HAS BEEN OUT OF SERVICE FOR PREVENTIVE MAINTENANCE, INCLUDING INTRUSIVE CYLINDER WORK

Task Standards :

31 (32 OR 33) EDG IS RUNNING IN ACCORDANCE WITH SOP-EL-1

Tools Needed:

EAR PROTECTION
FLASHLIGHT

Initiating Cues :

YOU ARE DIRECTED TO MANUALLY START BUT DO NOT LOAD 31 (32, 33) EDG

References :

ID	Description	Review Date	Ref Flag
SOP EL-1	DIESEL GENERATOR OPERATION		<input checked="" type="checkbox"/>

Safety Considerations :

ENSURE ALL PRECAUTIONS & LIMITATIONS, AND EDGS PARAMETERS ARE IN SPECIFICATIONS

Consequences of Inadequate Performance:

EDG MAY BE DAMAGED AND BECOME INOPERABLE

Performance Checklist :

- 1 **Element :**
OBTAIN AND REVIEW
SOP-EL-1
- Standards :**
OBTAIN AND REVIEW
CURRENT REVISION OF
SOP-EL-1
- Conditions :**
A CURRENT REVISION OF
SOP-EL-1 IS HANGING IN THE
EDG ROOM BY THE CONTROL
PANEL

Comments :**Critical Task?** ☒ N**Satisfactory** ☐**Unsatisfactory** ☐

- 2 **Element :**
CHECK APPLICABLE LUBE
OIL CHECK VALVES SEATED
DLO-22,23&24 (DLO-25,26&27
OR DLO-28,29&29)
- Standards :**
DETERMINE 3/8 INCH
RISER LINES NOT HOT
TO TOUCH
- Conditions :**
CUE: LINE IS WARM; HOT TO
TOUCH IS INDICATIVE OF
LEAKAGE

Comments :**Critical Task?** ☒ N**Satisfactory** ☐**Unsatisfactory** ☐

- 3 **Element :**
IF SM PROVIDES
PERMISSION, THEN PLACE
ENGINE CONTROL SWITCH
FOR THE DG TO BE STARTED
IN "OFF"
- Standards :**
ENSURES ENGINE
CONTROL SWITCH IS IN
"OFF"
- Conditions :**
CUE: SM GIVES HIS
PERMISSION TO PLACE
ENGINE CONTROL SWITCH
TO "OFF"

Comments :**Critical Task?** ☒ N**Satisfactory** ☐**Unsatisfactory** ☐

- 4 **Element :**
MANUALLY TRIP THE
ENGINE OVERSPEED TRIP
LEVER
- Standards :**
RAISE OVERSPEED TRIP
LEVER
- Conditions :**
CUE: OVERSPEED TRIP LEVER
RAISES AND 86 RELAY TRIPS

Comments :

Critical Task? ☒ YSatisfactory ☐Unsatisfactory ☐

5 Element :
OPEN ALL CYLINDER
INDICATOR COCKS

Standards :
ROTATE ALL CYLINDER
INDICATOR COCKS
COUNTER-CLOCKWISE

Conditions :
CUE: CYLINDER INDICATOR
COCKS ROTATE COUNTER
CLOCKWISE

Comments :

Critical Task? ☐ NSatisfactory ☐Unsatisfactory ☐

6 Element :
USING A SERIES OF SHORT
BUMPS, DEPRESS
PUSHBUTTON ON SOUTH
END OF SOLENOID TO TURN
ENGINE OVER A FEW
REVOLUTIONS AT EITHER
EAST OR WEST AIR START
SOLENOID VALVE

Standards :
BRIEFLY DEPRESS
START BUTTON AT EAST
OR WEST HAND AIR
START SOLENOID

Conditions :
CUE: NOISE HEARD - ENGINE
ROTATES 3 REVOLUTIONS

Comments :

Critical Task? ☐ NSatisfactory ☐Unsatisfactory ☐

7 Element :
IF THE DG STARTS, THEN
IMMEDIATELY DEPRESS
EMERGENCY STOP BUTTON
AND EVACUATE AREA
UNTIL DG HAS COME TO A
COMPLETE STOP

Standards :
NO ACTION TAKEN

Conditions :
CUE: EDG DOES NOT START

Comments :

Critical Task? ☐ NSatisfactory ☐Unsatisfactory ☐

8 **Element :**
VERIFY WATER/OIL DOES
NOT STREAM OUT FROM
ANY OF INDICATOR COCKS

Standards :
OBSERVE INDICATOR
COCKS

Conditions :
CUE: WATER/OIL DOES NOT
STREAM OUT FROM
INDICATOR COCKS

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

9 **Element :**
CLOSE INDICATOR COCKS

Standards :
ROTATE INDICATOR
COCKS CLOCKWISE

Conditions :
CUE: INDICATOR COCKS
STOP ROTATING CLOCKWISE

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

10 **Element :**
RESET ENGINE OVERSPEED
TRIP LEVER

Standards :
PULL OUT OVERSPEED
TRIP LEVER

Conditions :
CUE: OVERSPEED TRIP LEVER
PULLS OUT

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

11 **Element :**
RETURN ENGINE CONTROL
SWITCH IN "AUTO"

Standards :
ROTATE ENGINE
CONTROL SWITCH TO
"AUTO" POSITION

Conditions :
CUE: CONTROL SWITCH IS
SET TO AUTO POSITION

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

12 **Element :**
NOTIFY CONTROL ROOM
OPERATOR

Standards :
CONTACT CONTROL
ROOM, INFORM THAT
ENGINE CONTROL IS IN
AUTO

Conditions :
CUE: CONTROL ROOM
ACKNOWLEDGES REPORT

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

13

Element :

CHECK THE FOLLOWING
AREAS TO DETERMINE IF
MAINTENANCE OR
CONSTRUCTION ACTIVITIES
ARE IN PROGRESS; 480V
SWITCHGEAR; MCC-37;
SURROUNDING AREAS

Standards :

OBSERVE 480V
SWITCHGEAR
AREA; CONTACT
NUCLEAR NPO TO
DETERMINE IF WORK IS
GOING ON NEAR
MCC-37; OBSERVE AREA
AROUND DIESEL
GENERATOR

Conditions :

CUE: NO WORK IS GOING ON
IN ANY AREA LISTED ABOVE

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

14

Element :

ENSURE THAT ALL OF THE
FOLLOWING SWITCH
POSITIONS AND CONDITIONS
ARE MET

Standards :

Conditions :

PERFORM STEPS 15-21 BELOW

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

15

Element :

PLACE LAMP TEST SWITCH
IN "ON" AND VERIFY ALARM
LIGHTS ARE OPERATIONAL.

Standards :

SWITCH SET TO ON
POSITION AND
OBSERVES LIGHTS LIT

Conditions :

CUE: SWITCH IS SET TO ON
CUE: ALARM LIGHTS ARE ON

Comments :

Critical Task? ☒ NSatisfactory ☐Unsatisfactory ☐

16 **Element :**
RETURN LAMP TEST SWITCH
TO "OFF"

Standards :
SWITCH SET TO OFF
POSITION

Conditions :
CUE: SWITCH SET TO OFF
CUE: ALARM LIGHTS ARE OFF

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

17 **Element :**
ENSURE LOCKOUT RELAY
SWITCH IS "RESET"

Standards :
LOCKOUT RELAY
SHOULD HAVE
ACTUATED WHEN
OVERSPEED TRIP LEVER
WAS TRIPPED
LOCKOUT RELAY
SWITCH ROTATED TO
RESET POSITION

Conditions :
CUE: SWITCH IS ROTATED TO
RESET POSITION

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

18 **Element :**
ENSURE VOLTAGE
REGULATOR
UNIT-PARALLEL SWITCH IS
IN "UNIT"

Standards :
OBSERVE
UNIT-PARALLEL SWITCH
IN "UNIT"

Conditions :
CUE: UNIT-PARALLEL
SWITCH IS IN "UNIT"

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

19 **Element :**
ENSURE VOLTAGE
REGULATOR TRANSFER
CONTROL SWITCH IS IN
"AUTO"

Standards :
OBSERVE VOLTAGE
REGULATOR TRANSFER
CONTROL SWITCH IN
"AUTO"

Conditions :
CUE: VOLTAGE REGULATOR
TRANSFER CONTROL SWITCH
IS IN "AUTO"

Comments :

Critical Task? ☐ NSatisfactory ☐Unsatisfactory ☐

20 Element :
ENSURE LOCAL REMOTE
SWITCH IS IN "LOCAL"

Standards :
OBSERVE LOCAL
REMOTE SWITCH IN
LOCAL

Conditions :
CUE: LOCAL REMOTE
SWITCH IS IN LOCAL

Comments :

Critical Task? ☐ NSatisfactory ☐Unsatisfactory ☐

21 Element :
ENSURE THE FOLLOWING
RELAY FLAGS ON DG
CABINET ARE RESET;
REVERSE POWER;
OVERCURRENT PHASE 1, 2,
&3; UNDER OVER VOLTAGE
RELAY

Standards :
OBSERVE INDICATING
TARGETS RESET

Conditions :
CUE: INDICATING TARGETS
RESET

Comments :

Critical Task? ☐ NSatisfactory ☐Unsatisfactory ☐

22 Element :
NOTIFY CONTROL ROOM 31
(32, 33) DG WILL BE STARTED
IN MANUAL

Standards :
CONTACT CR AND
NOTIFY DG WILL BE
STARTED IN MANUAL

Conditions :
CUE: CONTROL ROOM
ACKNOWLEDGES

Comments :

Critical Task? ☐ NSatisfactory ☐Unsatisfactory ☐

23 **Element :** CHECK ESSENTIAL SW
PRESS GREATER THAN 75
PSIG

Standards : CHECK SW PRESSURE
ON GUAGE PANEL

Conditions : CUE: PRESSURE IS 80 PSIG

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

24 **Element :** PLACE ENGINE CONTROL
SWITCH IN "MANUAL"

Standards : ROTATE ENGINE
CONTROL SWITCH TO
"MANUAL" POSITION

Conditions : CUE: SWITCH IS SET TO
MANUAL

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

25 **Element :** DEPRESS ENGINE START
PUSHBUTTON

Standards : DEPRESS START
PUSHBUTTON

Conditions : CUE: ENGINE START
PUSHBUTTON DEPRESSED
CUE: ENGINE STARTED

Comments :

Critical Task? ☒ Y

Satisfactory ☐

Unsatisfactory ☐

26 **Element :** RAISE AND LOWER
FREQUENCY 0.5 HZ BY
USING GOVERNOR SWITCH

Standards : ADJUST TOGGLE SWITCH
TO RAISE AND LOWER
FREQUENCY

Conditions : CUE: FREQUENCY INCREASES
AND DECREASES 0.5 HZ

Comments :

Critical Task? ☒ N

Satisfactory ☐

Unsatisfactory ☐

27 **Element :** ADJUST FREQUENCY TO 60
HZ

Standards : ADJUST TOGGLE SWITCH
UNTIL FREQUENCY IS 60
HZ.

Conditions : CUE: FREQUENCY IS 60 HZ

DIESEL LOAD JPM

		SAT	UNSAT
10	Examniner cue: Hi water temperature alarm on EDG control panel		
()	Candidate refer to ARP-19	_____	_____
11	Verfiy hi water temp indication		
()	candidate observes JW inlet temp indicator for EDG:TI2131	_____	_____
	examniner cue temp = 190 deg F.		
12	Check cooler DP		
()	candidate checks cooler DP PDI1495	_____	_____
	examiner cue DP indicates zero		
13	Open SWS flow control valves		
(C)	Candidate OPENS SWN-FCV-1176 and 1176A via control switches	_____	_____
	examiner cue: valves open		

END JPM