Facility: Browns Ferry NPP (Unit 2 Simulator) Date of Examination: 5/7/2012

Exam Level: RO/SROI/**SROU** Operating Test No.: 1205

Control Room Systems@ (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	**Type Code***	**Safety Function**
a. Recirc Pump trip, power oscillations and loss of ability to insert rods require manual reactor scram	**A, N, S**	**1**
b. Remove RFPT 'A' from service	A, N, S	2
c. Rapid Depressurization with Turbine Bypass Valves EOI Appendix-11H	L, N, S	3
d. EHC Auto Cooldown	**L, N, S**	**4**
e. EOI Appendix-13 Emergency Venting Primary Containment	**A, EN, P, S**	**5**
f. 0-OI-82, Parallel D/G with Off-Site Power	D, S	6
g. Off-Gas Post-Treatment Radiation HI-HI-HI	A, D, S	9
h. Returning an IRM to service from Bypass	D, L, S	7(RO only)
In-Plant Systems@ (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. 1-EOI Appendix-1B, Vent and Re-pressurize the Scram Pilot Air Header	D, E, R	1
j. 2-AOI-100-2, Attachment 3, Part A- Start RCIC from outside the Control Room	**D, E, R**	**7**
k. 0-SSI-2-1, Attachment 2	**A, D, E**	**8**

@ **All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.**

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6/2-3 **(5)(5)(3)**
(C)ontrol room	
(D)irect from bank	≤ 9/≤ 8/≤4 **(6)(5)(2)**
(E)mergency or abnormal in-plant	≥ 1/≥ 1/≥1 **(3)(3)(2)**
(EN)gineered safety feature	- / - /≥1 (control room system) **(1)(1)(1)**
(L)ow-Power / Shutdown	≥1/≥1/≥1 **(3)(2)(1)**
(N)ew or (M)odified from bank including 1(A)	≥ 2/≥ 2/≥1 **(4)(4)(2)**
(P)revious 2 exams	≤ 3/≤ 3/≤ 2 (randomly selected) **(1)(1)(1)**
(R)CA	≥1/≥1/≥1 **(2)(2)(1)**
(S)imulator	**(8)(7)(3)**

Control Room Systems:

a. Recirc Pump trip, power oscillations and loss of RPIS require manual reactor scram

- Alternate Path/New/Simulator
- 2-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable.
- 295001 Partial or Complete Loss of Forced Core Flow Circulation, AA2.02 Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION : Neutron monitoring. IMPORTANCE: RO 3.1 SRO 3.2
- The operator will perform the actions of 2-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable. This will direct the operator to insert control rods to less than 92.5% load line to suppress power oscillations. A failure of Rod Control Power will occur. Power oscillations will ramp in and the following alarm will come in, "OPRM Pre-Trip Condition," 2-9-5A window 18. With power oscillations present, the ARP will direct the operator to manually scram the reactor in these conditions.

b. Remove RFPT 'A' from Service

- Alternate Path/New/Simulator
- 2-OI-3, Reactor Feedwater System
- 259001 Reactor Feedwater System A4.04 Ability to manually operate and/or monitor in the Control Room: System valves. IMPORTANCE: RO 3.1 SRO 2.9
- Operator will be directed remove the 2A RFPT from service in accordance with 2-OI-3, Reactor Feedwater System. The operator will identify that the RFPT 2A discharge check valve fails to close and take actions in accordance with 2-OI-3

c. Rapid Depressurization with Turbine Bypass Valves, EOI Appendix-11H (Unit 2 only)

- Low Power/New/Simulator
- 2-EOI Appendix-11H, Alternate RPV Pressure Control Systems – Main Condenser
- 241000 Reactor/Turbine Pressure Regulating System A4.06 Ability to manually operate and/or monitor in the control room: Bypass valves IMPORTANCE: RO 3.9 SRO 3.9
- Operator is directed to perform operations necessary to establish the Main Condenser as an Alternate RPV pressure control system for Rapid Depressurization as directed by 2-EOI Appendix-11H

d. EHC Auto Cooldown

- Low-Power/New/Simulator
- 2-OI-47, Turbine Generator System
- 239001 Main and Reheat Steam System A4.09 Ability to manually operate and/or monitor in the control room: Reactor Pressure IMPORTANCE: RO 3.9 SRO 3.3
- Operator is directed to commence an Auto Cooldown with EHC in accordance with 2-OI-47, Turbine Generator System. Operator must utilize the Human Machine Interface (HMI) of the EHC system to commence a cooldown as well as adjust final target pressure.

e. EOI Appendix-13 Emergency Venting Primary Containment

- Alternate Path /**EN**gineered Safety Feature /**P**revious /**S**imulator
- 2-EOI Appendix-13, Emergency Venting Primary Containment
- 295024 High Drywell Pressure EA2.01 Ability to determine and/or interpret the following as they apply to HIGH DRYWELL PRESSURE: Drywell Pressure IMPORTANCE: RO 4.2 SRO 4.4
- Operator is directed to emergency vent Primary Containment to restore and maintain Drywell Pressure below 55 psig as directed by 2-EOI Appendix-13, Emergency Venting Primary Containment. Emergency Venting of the Suppression Chamber through the Hardened Wetwell Vents will be unsuccessful and the operator will vent the Drywell to Secondary Containment via Primary Containment vent duct failure.

f. 0-OI-82, Parallel D/G with Off-Site Power Source

- **D**irect from bank/**S**imulator
- 0-OI-82, Standby Diesel Generator System
- 264000 Emergency Generators (Diesel/Jet) A4.04 Ability to manually operate and/or monitor in the control room: Manual start, loading, and stopping of emergency generator IMPORTANCE: RO 3.7 SRO 3.7
- Operator will perform actions necessary to parallel the A Diesel Generator (DG) with the Off-Site power source in accordance with 0-OI-82, Standby Diesel Generator System.

g. Off-Gas Post-Treatment Radiation HI-HI-HI

- Alternate Path/**D**irect from bank/**L**ow power/**S**imulator
- 2-ARP-9-4C, Window 35 and 2-AOI-66-2, Offgas Post-Treatment Radiation HI-HI-HI
- 271000 Offgas System A2.04 Ability to (a) predict the impacts of the following on the OFFGAS SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Offgas system high radiation IMPORTANCE: RO 3.5 SRO 3.8
- Operator is directed to respond to Offgas Post-Treatment Radiation HI-HI-HI alarm in accordance with 2-ARP-9-4C Window 35. Operator will determine that the Offgas Isolation valve 2-FCV-66-28 failed to close; operator will close the valve then refer to 2-AOI-66-2, Offgas Post-Treatment Radiation HI-HI-HI, and perform the actions of 2-AOI-66-2 insert a core flow runback and reactor scram. Operator will then shut the MSIVs.

h. Returning an IRM to service from Bypass (RO only)

- **D**irect from bank/**L**ow-Power/**S**imulator
- 2-OI-92A Intermediate Range Monitors
- 215003 Intermediate Range Monitor System A2.02 Ability to (a) predict the impacts of the following on the IRM System; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: IRM inop condition IMPORTANCE: RO 3.5 SRO 3.7
- Operator is directed to return a bypassed IRM to service in accordance with 2-OI-92A, Intermediate Range Monitors. Operator must fully insert the IRM and then range the IRM to the proper scale to prevent a half scram when un-bypassed.

In-Plant Systems:

i. 1-EOI Appendix-1B, Vent and Re-pressurize the Scram Pilot Air Header

- **D**irect from bank/**E**mergency or Abnormal In-Plant/**R**CA Entry
- 1-EOI Appendix-1B, Venting and Re-pressurizing the Scram Pilot Air Header
- 295015 Incomplete SCRAM AA1.01 Ability to operate and/or monitor the following as they apply to INCOMPLETE SCRAM: CRD hydraulics IMPORTANCE: RO 3.8 SRO 3.9
- Operator will simulate the component manipulations required to vent and subsequently re-pressurize the Scram Pilot Air Header as directed by 1-EOI Appendix 1B, Venting and Re-pressurizing the Scram Pilot Air Header.

j. 2-AOI-100-2, Attachment 3, Part A- Start RCIC from outside the Control Room

- **D**irect from bank/**E**mergency or Abnormal In-Plant/**R**CA Entry
- 2-AOI-100-2, Control Room Abandonment, Attachment 3, Part A
- 295016 Control Room Abandonment AA1.07 Ability to operate and/or monitor the following as they apply to CONTROL ROOM ABANDONMENT: Control room/local control transfer mechanisms IMPORTANCE: RO 4.2 SRO 4.3
- Operator will simulate performing operations necessary to align RCIC from outside the Control Room as directed by 2-AOI-100-2, Control Room Abandonment.

k. 0-SSI-2-1, Unit 2 Reactor Building Fire EL' 519 through 565 West of Column Line R11, Attachment 2

- **A**lternate Path/**D**irect from bank/**E**mergency or Abnormal In-Plant
- 0-SSI-2-1, Unit 2 Reactor Building Fire EL' 519 through 565 West of Column Line R11
- 600000 Plant Fire on Site AA2.16 Ability to determine and interpret the following as the apply to PLANT FIRE ON SITE: Vital equipment and control systems to be maintained and operated during a fire IMPORTANCE: RO 3.0 SRO 3.5
- Time Critical JPM for an operator to simulate performing designated steps of an SSI as directed by the Unit 2 Unit Supervisor and 0-SSI-2-1. Operator will have to simulate starting the 2D RHR pump using the manual breaker close pushbutton after the breaker fails to close.

Facility: Browns Ferry NPP (Unit 3 Simulator) Date of Examination: 5/7/2012

Exam Level: RO/SROI/**SROU** Operating Test No.: 1205

Control Room Systems@ (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	**Type Code***	**Safety Function**
a. Recirc Pump trip, power oscillations and loss of ability to insert rods require manual reactor scram	**A, N, S**	**1**
b. Remove RFPT 'A' from service	A, N, S	2
c. N/A (Unit 2 only)		
d. EHC Auto Cooldown	**L, N, S**	**4**
e. EOI Appendix-13 Emergency Venting Primary Containment	**A, EN, P, S**	**5**
f. 3-OI-82, Parallel D/G with Off-Site Power	D, S	6
g. Off-Gas Post-Treatment Radiation HI-HI-HI	A, D, S	9
h. Returning an IRM to service from Bypass	D, L, S	7(RO only)
In-Plant Systems@ (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. 1-EOI Appendix-1B, Vent and Re-pressurize the Scram Pilot Air Header	D, E, R	1
j. 2-AOI-100-2, Attachment 3, Part A- Start RCIC from outside the Control Room	**D, E, R**	**7**
k. 0-SSI-2-1, Attachment 2	**A, D, E**	**8**

@ **All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.**

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6/2-3 **(5)(5)(3)**
(C)ontrol room	
(D)irect from bank	≤ 9/≤ 8/≤4 **(6)(5)(2)**
(E)mergency or abnormal in-plant	≥ 1/≥ 1/≥1 **(3)(3)(2)**
(EN)gineered safety feature	- / - /≥1 (control room system) **(1)(1)(1)**
(L)ow-Power / Shutdown	≥1/≥1/≥1 **(2)(1)(1)**
(N)ew or (M)odified from bank including 1(A)	≥ 2/≥ 2/≥1 **(3)(3)(2)**
(P)revious 2 exams	≤ 3/≤ 3/≤ 2 (randomly selected) **(1)(1)(1)**
(R)CA	≥1/≥1/≥1 **(2)(2)(1)**
(S)imulator	**(7)(6)(3)**

Control Room Systems:

a. Recirc Pump trip, power oscillations and loss of RPIS require manual reactor scram

- Alternate Path/New/Simulator
- 3-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable.
- 295001 Partial or Complete Loss of Forced Core Flow Circulation, AA2.02 Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION : Neutron monitoring. IMPORTANCE: RO 3.1 SRO 3.2
- The operator will perform the actions of 3-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable. This will direct the operator to insert control rods to less than 92.5% load line to suppress power oscillations. A failure of Rod Control Power will occur. Power oscillations will ramp in and the following alarm will come in, "OPRM Pre-Trip Condition," 3-9-5A window 18. With power oscillations present, the ARP will direct the operator to manually scram the reactor in these conditions.

b. Remove RFPT 'A' from Service

- Alternate Path/New/Simulator
- 3-OI-3, Reactor Feedwater System
- 259001 Reactor Feedwater System A4.04 Ability to manually operate and/or monitor in the Control Room: System valves. IMPORTANCE: RO 3.1 SRO 2.9
- Operator will be directed remove the 3A RFPT from service in accordance with 3-OI-3, Reactor Feedwater System. The operator will identify that the RFPT 3A discharge check valve fails to close and take actions in accordance with 3-OI-3

c. N/A (Unit 2 only)

d. EHC Auto Cooldown

- Low-Power/New/Simulator
- 3-OI-47, Turbine Generator System
- 239001 Main and Reheat Steam System A4.09 Ability to manually operate and/or monitor in the control room: Reactor Pressure IMPORTANCE: RO 3.9 SRO 3.3
- Operator is directed to commence an Auto Cooldown with EHC in accordance with 3-OI-47, Turbine Generator System. Operator must utilize the Human Machine Interface (HMI) of the EHC system to commence a cooldown as well as adjust final target pressure.

e. EOI Appendix-13 Emergency Venting Primary Containment

- **A**lternate Path /**EN**gineered Safety Feature /**P**revious /**S**imulator
- 3-EOI Appendix-13, Emergency Venting Primary Containment
- 295024 High Drywell Pressure EA2.01 Ability to determine and/or interpret the following as they apply to HIGH DRYWELL PRESSURE: Drywell Pressure IMPORTANCE: RO 4.2 SRO 4.4
- Operator is directed to emergency vent Primary Containment to restore and maintain Drywell Pressure below 55 psig as directed by 3-EOI Appendix-13, Emergency Venting Primary Containment. Emergency Venting of the Suppression Chamber through the Hardened Wetwell Vents will be unsuccessful and the operator will vent the Drywell to Secondary Containment via Primary Containment vent duct failure.

f. 3-OI-82, Parallel D/G with Off-Site Power Source

- **D**irect from bank/**S**imulator
- 3-OI-82, Standby Diesel Generator System
- 264000 Emergency Generators (Diesel/Jet) A4.04 Ability to manually operate and/or monitor in the control room: Manual start, loading, and stopping of emergency generator IMPORTANCE: RO 3.7 SRO 3.7
- Operator will perform actions necessary to parallel the 3A Diesel Generator (DG) with the Off-Site power source in accordance with 3-OI-82, Standby Diesel Generator System.

g. Off-Gas Post-Treatment Radiation HI-HI-HI

- **A**lternate Path/**D**irect from bank/**L**ow power/**S**imulator
- 3-ARP-9-4C, Window 35 and 3-AOI-66-2, Offgas Post-Treatment Radiation HI-HI-HI
- 271000 Offgas System A2.04 Ability to (a) predict the impacts of the following on the OFFGAS SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Offgas system high radiation IMPORTANCE: RO 3.5 SRO 3.8
- Operator is directed to respond to Offgas Post-Treatment Radiation HI-HI-HI alarm in accordance with 3-ARP-9-4C Window 35. Operator will determine that the Offgas Isolation valve 3-FCV-66-28 failed to close; operator will close the valve then refer to 3-AOI-66-2, Offgas Post-Treatment Radiation HI-HI-HI, and perform the actions of 3-AOI-66-2 insert a core flow runback and reactor scram. Operator will then shut the MSIVs.

h. Returning an IRM to service from Bypass (RO only)

- **D**irect from bank/**L**ow-Power/**S**imulator
- 3-OI-92A Intermediate Range Monitors
- 215003 Intermediate Range Monitor System A2.02 Ability to (a) predict the impacts of the following on the IRM System; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: IRM inop condition IMPORTANCE: RO 3.5 SRO 3.7
- Operator is directed to return a bypassed IRM to service in accordance with 3-OI-92A, Intermediate Range Monitors. Operator must fully insert the IRM and then range the IRM to the proper scale to prevent a half scram when un-bypassed.

In-Plant Systems:

i. 1-EOI Appendix-1B, Vent and Re-pressurize the Scram Pilot Air Header

- **D**irect from bank/**E**mergency or Abnormal In-Plant/**R**CA Entry
- 1-EOI Appendix-1B, Venting and Re-pressurizing the Scram Pilot Air Header
- 295015 Incomplete SCRAM AA1.01 Ability to operate and/or monitor the following as they apply to INCOMPLETE SCRAM: CRD hydraulics IMPORTANCE: RO 3.8 SRO 3.9
- Operator will simulate the component manipulations required to vent and subsequently re-pressurize the Scram Pilot Air Header as directed by 1-EOI Appendix 1B, Venting and Re-pressurizing the Scram Pilot Air Header.

j. 2-AOI-100-2, Attachment 3, Part A- Start RCIC from outside the Control Room

- **D**irect from bank/**E**mergency or Abnormal In-Plant/**R**CA Entry
- 2-AOI-100-2, Control Room Abandonment, Attachment 3, Part A
- 295016 Control Room Abandonment AA1.07 Ability to operate and/or monitor the following as they apply to CONTROL ROOM ABANDONMENT: Control room/local control transfer mechanisms IMPORTANCE: RO 4.2 SRO 4.3
- Operator will simulate performing operations necessary to align RCIC from outside the Control Room as directed by 2-AOI-100-2, Control Room Abandonment.

k. 0-SSI-2-1, Unit 2 Reactor Building Fire EL' 519 through 565 West of Column Line R11, Attachment 2

- **A**lternate Path/**D**irect from bank/**E**mergency or Abnormal In-Plant
- 0-SSI-2-1, Unit 2 Reactor Building Fire EL' 519 through 565 West of Column Line R11
- 600000 Plant Fire on Site AA2.16 Ability to determine and interpret the following as the apply to PLANT FIRE ON SITE: Vital equipment and control systems to be maintained and operated during a fire IMPORTANCE: RO 3.0 SRO 3.5
- Time Critical JPM for an operator to simulate performing designated steps of an SSI as directed by the Unit 2 Unit Supervisor and 0-SSI-2-1. Operator will have to simulate starting the 2D RHR pump using the manual breaker close pushbutton after the breaker fails to close.

Facility: Browns Ferry NPP Date of Examination: 5/7/2012

Examination Level: RO/SRO Operating Test Number: 1205

Administrative Topic (see Note)	Type Code *	Describe activity to be performed
Conduct of Operations SRO/RO A1a	D	2.1.31 Verification of Off Site Power Availability to 4.16 kV Shutdown Boards
Conduct of Operations RO A1b	P	2.1.19 ICS Logs
SRO A1b	N	2.1.18 NRC event notification due to HPCI valve failure
Equipment Control RO A2	N	2.2.12 Complete Primary Containment Nitrogen Leakage and Consumption Surveillance and evaluate Acceptance Criteria
SRO A2	N	2.2.12 Complete Primary Containment Nitrogen Leakage and Consumption Surveillance, evaluate Acceptance Criteria, and determine Technical Specifications
Radiation Control SRO/RO A3	N	2.3.11 Calculate Airborne Effluent Release Rate iaw 0-SI-4.8.b.1.a.1
Emergency Plan SRO A4	M	2.4.41 Classify an Event

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

* Type Codes & Criteria:

(C)ontrol Room

(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs and RO retakes)

(N)ew or (M)odified from bank (≥ 1)

(P)revious 2 exams (≤ 1; randomly selected)

(S)imulator

Reactor Operator

1. Verification of Off Site Power Availability to 4.16 kV Shutdown Boards
   - Direct
   - 0-SR-3.8.1.A.1
   - Marks 500KV and 161KV Sources as Qualified. Completes Attachment 1 for Unit 3 accurately, records indicated voltages for step 7.2[5] and does not sign acceptance criteria, does not sign acceptance criteria for 7.4[1], and marks acceptance criteria satisfied on Surveillance Task Sheet as NO.
   - 2.1.31 Ability to locate control room switches, controls, and indications, and to determine that they correctly reflect the desired plant lineup. Importance RO 4.6

2. ICS Logs
   - Previous
   - 2-SR-2 or 3-SR-2
   - Perform Operator logs using ICS screens in accordance with 2-SR-2 Instrument Checks and Observations for log tables 1.1, 1.6, 1.25, and 1.30. Verify acceptance criteria are satisfied in accordance with notes.
   - 2.1.19 Ability to use plant computers to evaluate system or component status. RO 3.9

3. Complete Primary Containment Nitrogen Leakage and Consumption Surveillance and evaluate Acceptance Criteria
   - New
   - 3-SI-4.7.A.2.A, Primary Containment Nitrogen Leakage and Consumption
   - Completes Surveillance and determines that it does not meet acceptance criteria. Determines that an LCO must be entered and informs the Unit Supervisor.
   - 2.2.12 Knowledge of surveillance procedures. RO 3.7

4. Calculate Airborne Effluent Release Rate iaw 0-SI-4.8.b.1.a.1
   - New
   - 0-SI-4.8.B.1.a.1, 2-EOI Appendix-12
   - Calculate Stack Release Rate and Total Site Release Fraction determine it does not meet Acceptance Criteria, and determine that vent flowrate must be reduced in accordance with 2-EOI Appendix-12.
   - 2.3.11 Ability to control radiation releases RO 3.8

Senior Reactor Operator

1. Verification of Off Site Power Availability to 4.16 kV Shutdown Boards
   - Direct
   - 0-SR-3.8.1.A.1
   - Marks 500KV and 161KV Sources as Qualified. Completes Attachment 1 for Unit 3 accurately, records indicated voltages for step 7.2[5] and does not sign acceptance criteria, does not sign acceptance criteria for 7.4[1], and marks acceptance criteria satisfied on Surveillance Task Sheet as NO.
   - 2.1.31 Ability to locate control room switches, controls, and indications, and to determine that they correctly reflect the desired plant lineup. Importance SRO 4.3

2. NRC event notification due to HPCI Valve Failure
   - New
   - NPG-SPP-03.5, Regulatory Reporting Requirements
   - Determine NRC event notification requirements, as the Shift Manager due to a failure of the HPCI Pump Injection Valve. Determines Technical Specification actions required.
   - 2.1.18 Ability to make accurate, clear, and concise logs, records, status boards, and reports. Importance SRO 3.8

3. Complete Primary Containment Nitrogen Leakage and Consumption Surveillance, evaluate Acceptance Criteria, and determine Technical Specifications
   - New
   - 3-SI-4.7.A.2.A, Primary Containment Nitrogen Leakage and Consumption
   - Completes Surveillance, recognizes that it does not meet acceptance criteria, and determines Technical Specification actions required.
   - 2.2.12 Knowledge of surveillance procedures. SRO 4.1

4. Calculate Airborne Effluent Release Rate iaw 0-SI-4.8.b.1.a.1
   - New
   - 0-SI-4.8.B.1.a.1, 2-EOI Appendix-12
   - Calculate Stack Release Rate and Total Site Release Fraction determine it does not meet Acceptance Criteria, and determine that vent flowrate must be reduced in accordance with 2-EOI Appendix-12.
   - 2.3.11 Ability to control radiation releases SRO 4.3

5. Classify an Event

- Modified
- EPIP-1 and 3 Emergency Classification Procedure and Alert
- The event is classified as an Alert 1.1-A2 and the Initial Notification appendix is completed with the correct information. Event is classified within 15 minutes and Initial Notification is completed within 15 minutes of classification.
- 2.4.41 Knowledge of emergency action level thresholds and classifications. Importance SRO 4.6

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: a-**ALTERNATE PATH**

TASK NUMBER: U-068-AB-01

TASK TITLE: Recirc Pump Trip, Insert Rods, and Scram on loss of Rod movement and power oscillations

K/A NUMBER: 295001 AA2.02 K/A RATING: RO 3.1 SRO 3.2

PRA:

TASK STANDARD: Perform actions of 2-AOI-68-1A for trip of single RR Pump, when the capability to insert control rods is lost and core oscillations are increasing, insert manual reactor scram in accordance with ARP 9-5A window 18. If an Automatic Scram occurs this would be a failure.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-AOI-68-1A, 2-ARP-9-5A

VALIDATION TIME: 5 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator. Unit 2 is operating at approximately 100% power.

INITIATING CUES: You are directed to maintain plant conditions.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator. Unit 2 is operating at approximately 100% power.

INITIATING CUES: You are directed to maintain plant conditions.

START TIME _____

Driver: When directed by the Examiner, insert imf th03a to trip Reactor Recirc Pump 2A

****

Performance Step 1: Critical Not Critical X

Operator recognizes that the 2A Reactor Recirc Pump has tripped and refers to 2-AOI-68-1A

2-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable

4.1 Immediate Actions

None

4.2 Subsequent Actions

NOTE

Step 4.2[3] through Step 4.2[17.3] apply to any core flow lowering event.

[1] **IF** both Recirc Pumps are tripped in modes 1 or 2, **THEN** (Otherwise N/A),

[1.1] **SCRAM** the Reactor.

CAUTION

Failure to restart Reactor Recirculation pumps in a timely manner may result in exceeding the differential temperature limit for pump start and subsequently require plant depressurization to avoid exceeding pressure-temperature limits for the reactor vessel.

[1.2] **RESTART** affected Reactor Recirculation pumps. Refer to 2-OI-68 Section 8.0.

[1.3] **IF** the ΔT between the Rx vessel bottom head temperature and the moderator temperature precludes restart of a Recirc pump, **OR** forced Recirculation flow CANNOT be established for any reason, **THEN** (Otherwise NA)

[1.3.1] **INITIATE** a plant cooldown to prevent exceeding the pressure limit for the Rx vessel bottom head temperature indicated on 2-PNL-9-47, 2-TR-56-4 pt. 10 and based on Tech Specs Figure 3.4.9-1.

[1.3.2] **INFORM** the Unit Supervisor, Tech Spec 3.4.1 requires the Reactor be placed in Mode 3 in 12 hours. Refer to 2-GOI-100-12A and Tech Specs 3.4.1.B.

Standard:

Step [1] is N/A because both Recirc Pumps are not tripped

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

NOTE

Power To Flow Map is maintained in 0-TI-248"Station Reactor Engineer" and on ICS.

****

Performance Step 2: Critical X Not Critical

[2] **IF** a single Recirc Pump tripped, **THEN CLOSE** tripped Recirc Pump discharge valve.

Standard:

Close Recirc Pump 2A Discharge Valve, 2-HS-68-3A and receives annunciator 9-4A Window 35, RECIRC LOOP A FLOW LIMITER ENFORCING

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: When 2-FCV-68-3 is shut verify power oscillations automatically insert (imf cr02a 60 600 0)

****

Performance Step 3: Critical Not Critical X

[3] **IF** Region I or II of the Power to Flow Map is entered, **THEN IMMEDIATELY** take actions to INSERT control rods to less than 95.2% loadline. Refer to 0-TI-464, Reactivity Control Plan Development and Implementation.

Standard:

Using the Emergency Shove Sheet, selects a Control Rod and inserts to 00.
RODS: **22-31** from 08 to 00, **30-39** from 08 to 00, **38-31** from 08 to 00, **30-23** from 08 to 00

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: When alarm 9-5A, Window 18 (OPRM Pre-Trip Condition) comes in, insert trg! e5. This will fail CRD Power to Off so no other control rod can be inserted (ior zdihs8546 off)

ALTERNATE PATH STARTS ON THE NEXT STEP

****

Performance Step 4: Critical X Not Critical

Operator recognizes another Control Rod cannot be inserted.

Operator identifies Power Oscillations or responds to 2-9-5A window 18 alarm

Standard:

Enter 2-9-5A window 18

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical_ Not Critical X

2-ARP-9-5A Window 18

A. **OBSERVE** the amplitude does **NOT** exceed its pre-trip setpoint.

B. **RESET** the alarm.

C. **IF** the alarm fails to reset, **PERFORM** the following:

INSERT control rods as recommended by the Reactor Engineer/Unit Supervisor to suppress the oscillations.

Standard:

Operator observes SRMs meter indications and APRM Indications, attempts alarm reset. Unable to Insert Control Rods

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

D. **IF** insertion of control rods is **NOT** successful in suppressing oscillations OR control rods can **NOT** be inserted, **THEN SCRAM** the reactor. **REFER TO** 2-AOI-100-1.

Standard:

Operator inserts a Manual Reactor Scram AND places the Mode Switch in Shutdown

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 7: Critical Not Critical X

Operator performs Scram announcement

Standard:

REPORT the following status to the US:
Reactor Scram, Mode Switch is in Shutdown, All rods in, Reactor Water Level and trend, Reactor pressure and trend, MSIV position, and Power level

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: a-**ALTERNATE PATH**

TASK NUMBER: U-068-AB-01

TASK TITLE: Recirc Pump Trip, Insert Rods, and Scram on loss of Rod movement and power oscillations

K/A NUMBER: 295001 AA2.02 K/A RATING: RO 3.1 SRO 3.2

PRA:

TASK STANDARD: Perform actions of 3-AOI-68-1A for trip of single RR Pump, when the capability to insert control rods is lost and core oscillations are increasing, insert manual reactor scram in accordance with ARP 9-5A window 18. If an Automatic Scram occurs this would be a failure.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-AOI-68-1A, 3-ARP-9-5A

VALIDATION TIME: 5 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator. Unit 3 is operating at approximately 100% power.

INITIATING CUES: You are directed to maintain plant conditions.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator. Unit 3 is operating at approximately 100% power.

INITIATING CUES: You are directed to maintain plant conditions.

START TIME _____

Driver: When directed by the Examiner, insert imf th03a to trip Reactor Recirc Pump 3A

****

Performance Step 1: Critical Not Critical X

Operator recognizes that the 3A Reactor Recirc Pump has tripped and refers to 3-AOI-68-1A

3-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable

4.1 Immediate Actions

None

4.2 Subsequent Actions

NOTE

Step 4.2[3] through Step 4.2[17.1.3] apply to any core flow lowering event.

[1] **IF** both Recirc Pumps are tripped in modes 1 or 2, **THEN** (Otherwise N/A),

[1.1] **SCRAM** the Reactor.

CAUTION

Failure to restart Reactor Recirculation pumps in a timely manner may result in exceeding the differential temperature limit for pump start and subsequently require plant depressurization to avoid exceeding pressure-temperature limits for the reactor vessel.

[1.2] **RESTART** affected Reactor Recirculation pumps. **REFER TO** 3-OI-68 Section 8.0.

[1.3] **IF** the ΔT between the Rx vessel bottom head temperature and the moderator temperature precludes restart of a Recirc pump, **OR** forced Recirculation flow CANNOT be established for any reason, **THEN** (Otherwise NA)

[1.3.1] **INITIATE** a plant cooldown to prevent exceeding the pressure limit for the Rx vessel bottom head temperature indicated on 3-PNL-9-47, 3-TR-56-4 pt. 10 and based on Tech Specs Figure 3.4.9-1.

[1.3.2] **INFORM** the Unit Supervisor, Tech Spec 3.4.1 requires the Reactor be placed in Mode 3 in 12 hours. Refer to 3-GOI-100-12A and Tech Specs 3.4.1.B.

Standard:

Step [1] is N/A because both Recirc Pumps are not tripped

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

[2] **IF** a single Recirc Pump tripped, **THEN CLOSE** tripped Recirc Pump discharge valve.

Standard:

Close Recirc Pump 3A Discharge Valve, 3-HS-68-3A and receives annunciator 9-4A Window 35, RECIRC LOOP A FLOW LIMITER ENFORCING

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: When 3-FCV-68-3 is shut verify power oscillations automatically insert (imf cr02a 60 600 0)

****

Performance Step 3: Critical Not Critical X

[3] **IF** Region I or II of the Power to Flow Map is entered, **THEN IMMEDIATELY** take actions to INSERT control rods to less than 95.2% loadline. Refer to 0-TI-464, Reactivity Control Plan Development and Implementation.

Standard:

Using the Emergency Shove Sheet, selects a Control Rod and inserts to 00.
RODS: **22-39** from 10 to 00, **38-39** from 10 to 00, **38-31** from 10 to 00, **22-23** from 10 to 00

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

Driver: When alarm 9-5A, Window 18 (OPRM Pre-Trip Condition) comes in, fire trigger 5. This will fail CRD Power to Off so no other control rod can be inserted (ior zdihs8546 off)

ALTERNATE PATH STARTS ON THE NEXT STEP

****

Performance Step 4: Critical X Not Critical

Operator recognizes another Control Rod cannot be inserted.

Operator identifies Power Oscillations or responds to 3-9-5A window 18 alarm

Standard:

Enter 3-9-5A window 18

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 5: Critical_ Not Critical X

3-ARP-9-5A Window 18

A. **VERIFY** the amplitude does **NOT** exceed its pre-trip setpoint.

B. **RESET** the alarm.

C. **IF** the alarm fails to reset, perform the following:
- **INSERT** control rods.
- **ADJUST** recirc flow as recommended by the Reactor Engineer/Unit Supervisor to suppress the oscillations.
- **REFER TO** 3-SR-3.1.3.5(A), 3-GOI-100-1A, 3-GOI-100-12, 3-GOI-100-12A and 0-TI-464.

Standard:

Operator observes SRMs meter indications and APRM Indications, attempts alarm reset. Unable to Insert Control Rods

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

D. **IF** insertion of control rods is not successful in suppressing oscillations OR control rods cannot be inserted, **THEN SCRAM** the reactor. **REFER TO** 3-AOI-100-1.

Standard:

Operator inserts a Manual Reactor Scram AND places the Mode Switch in Shutdown

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical Not Critical X

Operator performs Scram announcement

Standard:

REPORT the following status to the US:
Reactor Scram, Mode Switch is in Shutdown, All rods in, Reactor Water Level and trend, Reactor pressure and trend, MSIV position, and Power level

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: b- **ALTERNATE PATH**

TASK NUMBER: U-003-AL-01

TASK TITLE: Remove RFPT 'A' from Service

K/A NUMBER: 259001 A4.04 K/A RATING: RO 3.1 SRO 2.9

PRA:

TASK STANDARD: Removes RFPT A from service, trips RFPT A and closes discharge valve

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-OI-3

VALIDATION TIME: 20 minutes

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are the Unit Operator. An oil leak has been identified on RFPT 2A. RFPT 2A needs to removed from service.

INITIATING CUES: The Unit Supervisor directs you to remove RFPT 2A from service in accordance with 2-OI-3, Reactor Feedwater System section 7.1. Precautions and Limitations have been reviewed.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are the Unit Operator. An oil leak has been identified on RFPT 2A. RFPT 2A needs to removed from service.

INITIATING CUES: The Unit Supervisor directs you to remove RFPT 2A from service in accordance with 2-OI-3, Reactor Feedwater System section 7.1. Precautions and Limitations have been reviewed.

START TIME_____

****

Performance Step 1: Critical Not Critical X

7.1 RFP/RFPT Shutdown

CAUTIONS

1) FAILURE to monitor SJAE/OG CNDR CNDS FLOW, 2-FI-2-42, on Panel 2-9-6 for proper flow (between 2 x 106 and 3 x 106 lbm/hr) may result in SJAE isolation.
2) Changes in Condensate System flow may require adjustment to SPE CNDS BYPASS, 2-FCV-002-0190.
3) When isolating the Reactor Feedwater Pump(s) for maintenance, the associated injection water should also be isolated to prevent high seal differential pressure and allow the RFW Pump shafts to rotate freely. (BFNPER123395)
4) When a Reactor Feed Pump is isolated (suction, discharge, and minimum flow valve closed) with injection water aligned to the pump, there is a potential of rising pump casing pressure and seal water leakoff flows reaching the point where seal water drains are overcome and seal water is forced into the oil system through the bearing housings. Therefore, the time that a RFP is isolated with injection water aligned to the pump should be minimized.

[1] **REFER TO** Section 3.0 and **REVIEW** Precautions and Limitations.

[2] **IF** any Condensate or Condensate Booster Pump is NOT in service, **THEN** (Otherwise N/A).

[3] **IF** RFP being removed from service is last operating RFP, **THEN** (Otherwise N/A)

Standard:

Given in initial conditions that step 1 is complete and step 2 and 3 are NA.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical Not Critical X

[4] **VERIFY** in AUTO, RFPT 2A TURNING GEAR MOTOR, 2-HS-3-101A.

Standard:

Verifies 2-HS-3-101A in AUTO

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical _ Not Critical X

NOTES

1) When selected, Column 1 on individual RFPT Speed Control Panel Display Stations (PDS) displays actual pump speed and is not controlled in any mode.
2) When selected, Column 2 on individual RFPT Speed Control PDS displays pump flow bias and is changed with the Ramp Up/Ramp Down pushbuttons with the controller in AUTO.
3) When selected, Column 3 on individual RFPT Speed Control PDS displays RFPT speed demand and is changed with the Ramp Up/Ramp Down pushbuttons with the controller in MANUAL.
4) Illustration 2 can be referred to for additional information on the RFPT Speed Control PDSs.

[5] **LOWER** speed of RFPT/RFP being removed from service by either of the following methods:

• **IF** Using individual RFPT Manual Governor switch, **THEN GO TO** Step 7.1[6].

• **IF** Using individual RFPT Speed Control PDS in MANUAL, **THEN GO TO** Step 7.1[7].

Standard:

Operator proceeds to step 6 or step 7. NOTE most operators will go to step 6 (performance step 4).

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[6] **SLOWLY LOWER** speed of RFPT, using individual RFPT 2A SPEED CONT RAISE/LOWER switch, 2-HS-46-8A on Panel 2-9-5, by performing the following:

[6.1] **DEPRESS** RFPT Speed Control Raise/Lower switch to MANUAL GOVERNOR.

• **CHECK** amber light at switch illuminated.

Standard:

Depresses 2-HS-46-8A to Manual

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: *Critical X Not Critical

*[6.2] **SLOWLY LOWER** RFPT speed, by placing RFPT Speed Control switch in RAISE and LOWER positions, as necessary.

[6.3] **IF** this is the **NOT** the last operating feed pump, **THEN OBSERVE** rise in speed of any remaining RFPT operating in AUTO.

Standard:

Lowers speed of RFPT 2A and verifies RFPT 2B and 2C respond

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[7] **SLOWLY LOWER** speed of RFPT, using individual RFPT 2A SPEED CONTROL PDS, 2-SIC-46-8 by performing the following (Panel 2-9-5):

[7.1] **PLACE** PDS in MANUAL AND **VERIFY** Column 3 is selected.

Standard:

Places 2-SIC-46-8 in Manual

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

NOTE

Steps 5.7[9] and 5.7[10] transfers control of RFPT from MANUAL GOVERNOR to individual RFPT Speed Control PDS.

****

Performance Step 7: *Critical X Not Critical

*[7.2] **SLOWLY LOWER** RFPT speed, using Ramp Up/Ramp Down pushbuttons as necessary.

[7.3] **IF** this is the **NOT** the last operating feed pump, **THEN OBSERVE** rise in speed of any remaining RFPT operating in AUTO.

Standard:

Lowers speed of RFPT 2A and verifies RFPT 2B and 2C respond

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

ALTERNATE PATH STARTS ON THE NEXT STEP

****

Performance Step 8: Critical X Not Critical

CAUTION

RFP Discharge Check Valve may fail to close when removing a RFP from service.

[8] **IF** at any time RFP Discharge Check Valve failure is experienced while removing RFP from service, **THEN REFER TO** Step 7.1[14].

Standard:

When Operator lowers speed far enough they will notice the failure of RFP Discharge Check Valve due to check valve failing to close and Reactor Water level lowering. Operator will transition to step 7.1[14].

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical Not Critical X

[9] **CONTINUE** to slowly lower RFPT speed to minimum speed setting (approximately 600 rpm).

Standard:

Operator will continue to lower speed, once speed has lowered far enough that RFPT 2A discharge pressure is below the discharge pressure of RFPT 2B and 2C, the operator will respond to a failure of RFPT 2A Discharge Check Valve Failure

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical Not Critical X

[14] **IF** RFP Discharge Check Valve failure is experienced, **THEN**

[14.1] **DEPRESS** RFP 2A(2B)(2C) DISCHARGE TESTABLE CK VLV pushbutton, 2-HS-3-94A.

• **VERIFY** Discharge Check Valve closed.

Standard:

Operator depresses 2-HS-3-94A, Check Valve fails to close

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical Not Critical X

[14.2] **IF** RFP Discharge Check Valve failure is still being experienced, **THEN PERFORM** either of the following:

[14.2.1] **IMMEDIATELY RETURN** RFP to service.

Standard:

Operator may raise speed of RFPT 2A and attempt to return to service.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Remove RFPT 2A from service

NOTE: Operator may lower pump speed to 600 RPM prior to tripping pump.

****

Performance Step 12: *Critical X Not Critical

[14.2.2] **PERFORM** the following:

A. **VERIFY OPEN** RFP 2A MIN FLOW VALVE, 2-FCV-3-20

*B. **CLOSE** RFP 2A DISCHARGE VALVE using 2-HS-3-19A

*C. **VERIFY** RFP tripped.

Standard:

Verifies RFP 2A min flow valve Open, Closes RFP 2A Discharge Valve 2-HS-3-19A AND Trips RFPT 2A.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13: Critical _ Not Critical X

[14.3] **REQUEST** assistance from Site Engineering and Maintenance.

Standard:

Operator request assistance

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: b- **ALTERNATE PATH**

TASK NUMBER: U-003-AL-01

TASK TITLE: Place RFPT 'A' in Service

K/A NUMBER: 259001 A4.04 K/A RATING: RO 3.1 SRO 2.9

PRA:

TASK STANDARD: Removes RFPT A from service, trips RFPT A and closes discharge valve

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-OI-3

VALIDATION TIME: 20 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are the Unit Operator. An oil leak has been identified on RFPT 3A. RFPT 3A needs to removed from service.

INITIATING CUES: The Unit Supervisor directs you to remove RFPT 3A from service in accordance with 3-OI-3, Reactor Feedwater System section 7.1. Precautions and Limitations have been reviewed.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are the Unit Operator. An oil leak has been identified on RFPT 3A. RFPT 3A needs to removed from service.

INITIATING CUES: The Unit Supervisor directs you to remove RFPT 3A from service in accordance with 3-OI-3, Reactor Feedwater System section 7.1. Precautions and Limitations have been reviewed.

START TIME_____

****

Performance Step 1: Critical Not Critical X

7.1 RFP/RFPT Shutdown

CAUTIONS

1) FAILURE to monitor SJAE/OG CNDR CNDS FLOW, 3-FI-2-42, on Panel 3-9-6 for proper flow (between 2 x 106 and 3 x 106 lbm/hr) may result in SJAE isolation.
2) Changes in Condensate System flow may require adjustment to SPE CNDS BYPASS, 3-FCV-002-0190.
3) When isolating the Reactor Feedwater Pump(s) for maintenance, the associated injection water should also be isolated to prevent high seal differential pressure and allow the RFW Pump shafts to rotate freely. (BFNPER123395)

[1] **REFER TO** Section 3.0 and **REVIEW** Precautions and Limitations.

NOTE

It may be necessary to switch to SINGLE ELEMENT mode from THREE ELEMENT mode earlier than recommended if Feedwater control becomes unstable.

[2] **IF** RFP being removed from service is last operating RFP **OR IF** at any time Feedwater control becomes unstable, **THEN** (Otherwise N/A).

Standard:

Given in initial conditions that step 1 is complete and step 2 is NA.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical Not Critical X

[3] **VERIFY** in AUTO, RFPT 3A TURNING GEAR MOTOR, 3-HS-3-101A.

Standard:

Verifies 3-HS-3-101A in AUTO

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical _ Not Critical X

NOTES

1) When selected, Column 1 on individual RFPT Speed Control Panel Display Stations (PDS) displays actual pump speed and is not controlled in any mode.
2) When selected, Column 2 on individual RFPT Speed Control PDS displays pump flow bias and is changed with the Ramp Up/Ramp Down pushbuttons with the controller in AUTO.
3) When selected, Column 3 on individual RFPT Speed Control PDS displays RFPT speed demand and is changed with the Ramp Up/Ramp Down pushbuttons with the controller in MANUAL.
4) Illustration 2 can be referred to for additional information on the RFPT Speed Control PDSs.

[4] **LOWER** speed of RFPT/RFP being removed from service by either of the following:

• **IF** Using individual RFPT Manual Governor switch, **THEN GO TO** Step 7.1[5].

• **IF** Using individual RFPT Speed Control PDS in MANUAL, **THEN GO TO** Step 7.1[6].

Standard:

Operator proceeds to step 5 or step 6. NOTE most operators will go to step 5 (performance step 4).

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[5] **SLOWLY LOWER** speed of RFPT, using individual RFPT 3A SPEED CONT RAISE/LOWER switch, 3-HS-46-8A on Panel 3-9-5, by performing the following:

[5.1] **DEPRESS** RFPT Speed Control Raise/Lower switch to MANUAL GOVERNOR.

• **VERIFY** illuminated amber light at switch.

Standard:

Depresses 3-HS-46-8A to Manual

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: *Critical X Not Critical

*[5.2] **SLOWLY LOWER** RFPT speed, by placing RFPT Speed Control switch in RAISE or LOWER positions, as necessary.

[5.3] **IF** this is the **NOT** the last operating feed pump, **THEN OBSERVE** rise in speed of any remaining RFPT operating in AUTO as RFW Control System maintains Reactor water level.

Standard:

Lowers speed of RFPT 3A and verifies RFPT 3B and 3C respond

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[6] **SLOWLY LOWER** speed of RFPT, using individual RFPT 3A SPEED CONTROL PDS, 3-SIC-46-8 by performing the following (Panel 3-9-5):

[6.1] **PLACE** PDS in MANUAL AND **VERIFY** Column 3 is selected.

Standard:

Places 3-SIC-46-8 in Manual

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: *Critical X Not Critical

*[6.2] **SLOWLY LOWER** RFPT speed, using Ramp Up/Ramp Down pushbuttons as necessary.

[6.3] **IF** this is the **NOT** the last operating feed pump, **THEN OBSERVE** rise in speed of any remaining RFPT operating in AUTO as RFW Control System maintains Reactor water level..

Standard:

Lowers speed of RFPT 3A and verifies RFPT 3B and 3C respond

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

ALTERNATE PATH STARTS ON THE NEXT STEP

****

Performance Step 8: *Critical X Not Critical

CAUTION

RFP Discharge Check Valve failure may be experienced while removing RFP from service.

[7] **IF** at any time RFP Discharge Check Valve failure is experienced while removing RFP from service, **THEN PERFORM** the following: (Otherwise N/A)

[7.1] **DEPRESS** RFP Discharge Testable Check valve push-button for approximately ten seconds (Panel 3-9-6).

Standard:

*When Operator lowers speed far enough they will notice the failure of RFP Discharge Check Valve due to check valve failing to close and Reactor Water level lowering. Operator will complete step 7.1[7].

Operator depresses 3-HS-3-94A, Check Valve fails to close

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical Not Critical X

[7.2] **CHECK** reverse flow through check valve has stopped.

[7.3] **IF** RFP Discharge Testable Check Valve failure is still being experienced, **THEN PERFORM** one of the following:

[7.3.1] **IMMEDIATELY RETURN** RFP to service.

Standard:

Operator may raise speed of RFPT 3A and attempt to return to service.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Remove RFPT 3A from service

NOTE: Operator may lower pump speed to 600 RPM prior to tripping pump.

****

Performance Step 10: *Critical X Not Critical

[7.3.2] **PERFORM** the following:

A. **VERIFY** open RFP Minimum Flow Valve.
*B. **CLOSE** RFP Discharge Valve.
*C. **TRIP** RFPT.

Standard:

Verifies RFP 3A min flow valve Open, Closes RFP 3A Discharge Valve 3-HS-3-19A AND Trips RFPT 3A.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: c

TASK NUMBER: U-000-SS-32

TASK TITLE: Line-up Alternate RPV Pressure Control Systems – Main Condenser, in accordance with 2-EOI Appendix-11H

K/A NUMBER: 241000 A4.06 K/A RATING: RO 3.9 SRO: 3.9

PRA:

TASK STANDARD: Perform operations necessary to establish the Main Condenser as an Alternate RPV pressure control system for Rapid Depressurization as directed by 2-EOI Appendix-11H

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-EOI Appendix-11H

VALIDATION TIME: 15 minutes

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator. Unit 2 reactor has scrammed. EOI-1 has been followed to C2-12. Emergency Depressurization has failed. The RPV is to be rapidly depressurized using 2-EOI Appendix-11H.

INITIATING CUE: The Unit 2 UNIT SUPERVISOR directs you to perform 2-EOI Appendix-11H, ALTERNATE RPV PRESSURE CONTROL SYSTEMS MAIN CONDENSER.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect, if applicable). When you have completed your assigned task, you will say "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator. Unit 2 reactor has scrammed. EOI-1 has been followed to C2-12. Emergency Depressurization has failed. The RPV is to be rapidly depressurized using 2-EOI Appendix-11H.

INITIATING CUE: The Unit 2 UNIT SUPERVISOR directs you to perform 2-EOI Appendix-11H, ALTERNATE RPV PRESSURE CONTROL SYSTEMS MAIN CONDENSER.

START TIME _____

****

Performance Step 1: Critical Not Critical X

1. IF ANY indication of gross fuel failure exists, THEN BEFORE continuing in this procedure, **NOTIFY** SED that offsite release rate limits may be exceeded.

Standard:

Identifies that NO gross fuel failure is indicated

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 2: Critical Not Critical X

2. **VERIFY** Main Condenser Off-Gas is aligned to the stack as follows:

   a. IF OG POST TRTMT RAD MONITOR HI-HI-HI/INOP Annunciator (2 XA-55-4C, Window 35) is sealed in, THEN **JUMPER** Off-Gas Post Treatment Radiation Hi-Hi-Hi Isolation to 2-FCV-66-28, OFFGAS SYSTEM ISOLATION VALVE, as follows:

      1) **REFER** to Attachment 1 and **OBTAIN** one banana jack jumper from Control Room EOI Equipment Storage Box.

      2) **LOCATE** terminal strip BB, Panel 9-53, Rear.

      3) **JUMPER** BB-59 to BB-60, Panel 9-53.

   b. **VERIFY OPEN** 2-FCV-66-28, OFFGAS SYSTEM ISOLATION VALVE (Panel 9-53).

Standard:

Verifies that annunciator 9-4C Window 35 is not sealed in AND verifies 2-FCV-66-28 is open

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 3: Critical _ Not Critical X

3. **VERIFY** SJAE 2A or 2B in service and aligned to Main Condenser (Panel 9-7).

Standard:

Verifies SJAE is in service and aligned

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical _ Not Critical X

4. IF EITHER of the following exists:

- 2-FCV-66-28, OFFGAS SYSTEM ISOLATION VALVE, CANNOT be opened,
  OR
- SJAEs CANNOT be placed in service or aligned to Main Condenser,

THEN **ALIGN** mechanical vacuum pumps as follows:

Standard:

Determines that step 4 is N/A because 2-FCV-66-28 is open and a SJAE is in service and aligned to the Main Condenser .

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical Not Critical X

5. IF ANY Main Steam Line is NOT isolated, THEN **CONTINUE** in this procedure at Step 12.

Standard:

Verifies MSIVs are NOT isolated and proceeds to step 12

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

12. **OPEN** Turbine Bypass valves as necessary to rapidly depressurize RPV.

Standard:

Using Bypass JACK, operator opens ALL Turbine Bypass Valves

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: When applicant opens all Turbine Bypass Valves, JPM complete

EXAMINER NOTE: Rapid Depressurization will continue to the Shutdown Cooling Interlock at 100 psig

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: d

TASK NUMBER: U-000-NO-32

TASK TITLE: EHC Auto Cooldown

K/A NUMBER: 239001 A4.09 K/A RATING: RO 3.9 SRO 3.9

PRA:

TASK STANDARD: Perform Cooldown with EHC Auto Cooldown Program

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-OI-47

VALIDATION TIME: 10 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. The Plant has been shutdown in preparation for a refueling outage. The Main Turbine is tripped. Reactor Water Level is stable and under control. Reactor Pressure is stable and being controlled by bypass valves.

INITIATING CUES: The Unit Supervisor directs you to commence an Auto Cooldown to 20 psig in accordance with 2-OI-47, Turbine-Generator System, Section 8.1.2, starting at step [6].

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect, if applicable). When you have completed your assigned task, you will say "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. The Plant has been shutdown in preparation for a refueling outage. The Main Turbine is tripped. Reactor Water Level is stable and under control. Reactor Pressure is stable and being controlled by bypass valves.

INITIATING CUES: The Unit Supervisor directs you to commence an Auto Cooldown to 20 psig in accordance with 2-OI-47, Turbine-Generator System, Section 8.1.2, starting at step [6].

START TIME_____

Examiner Note: This JPM requires Reactor Water Level Control with RFPT C in manual.

NOTES

1) When using the EHC Auto Cooldown program, injecting water into the Reactor Vessel using the Reactor Feed Pumps at a rapid rate will cause the Bypass Valve to go closed. The Bypass valves will slowly reopen to maintain the cooldown rate based upon a calculated cooldown chart.

2) If all Bypass Valves are closed due other sources causing a Reactor Cooldown, then when the Bypass Valves open, the Reactor Water Level will rise depending on how many valves opens. Keeping at least one Bypass Valve open minimizes this affect.

3) When using the EHC Auto Cooldown program, the Bypass Valve Jack can still be used to open the Bypass Valves, if the Bypass Valve Jack setpoint is not set at zero, then the Bypass valves may not go fully close and could cause exceeding the Programmed Cooldown Rate.

4) A dedicated operator should be established to control Reactor Water Level. To minimize large fluctuations in level, the Reactor Feed Pumps should be in manual.

5) Steam Loads should be on Aux Steam prior to performing this section to ensure proper operation of the EHC Automatic Cooldown Program. If steam loads are not transferred to Aux Steam then excessive cooldown and/or sporadic Reactor Water Level control may occur.

6) Prior to initiating EHC Auto Cooldown, the Pressure Control Setpoint should be set so that at least one bypass is opened and controlling Reactor Pressure.

****

Performance Step 1: Critical Not Critical X

8.1.2 EHC Automatic Cooldown Program

[1] **OBTAIN** Unit Supervisor Permission to perform Reactor Cooldown using the EHC Automatic Cooldown Program.

[2] **REVIEW** P&L for Auto Cooldown Controls.

[3] **VERIFY** the Main Turbine is tripped.

[4] **VERIFY** the steam loads are transferred to AUX Steam per 2-OI-66. (N/A if not transferred with Unit Supervisor permission and Shift Mangers concurrence. See not above.)

[5] **VERIFY** Reactor Water Level is stable and under control.

Standard:

Steps are complete in accordance with the initiating cue

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 2: Critical Not Critical X

[6] **VERIFY** EHC is in Pressure Control using 2-HS-47-204.

Standard:

Candidate verifies EHC is in pressure control using 2-HS-47-204.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 3: *Critical X Not Critical

[7] On the EHC Work Station on Panel 9-7:

[7.1] **SELECT** Main Menu from the toolbar at bottom of the screen.

*[7.2] **SELECT** Log In on Display Screen and **ENTER** "OPS" for name and "OPS" for Password.

*[7.3] **SELECT** Auto Cooldown from list of function on the screen.

Standard:

Candidate logs into EHC workstation and selects Auto Cooldown from the list of functions on the screen.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 4: Critical Not Critical X

[8] On the Auto Cooldown Display Screen

CHECK the following are displayed.

- Turbine Tripped or All Valves Closed - indicates Reset.
- Rx Press Ctrl - indicates Reset.

Standard:

Candidate checks the Turbine Tripped or All Valves Closed - indicates Reset.
Candidate checks Rx Press Ctrl - indicates Reset.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 5: Critical X Not Critical

[9] On the Auto Cooldown Screen **SET** the desired Final Pressure for cooldown as follows:

[9.1] **SELECT** the block above the "FINAL PRESSURE TARGET".

[9.2] **ENTER** the desired pressure using the Display Screen or Key Board.

[9.3] **WHEN** desired Pressure is entered **SELECT** "OK"

Standard:

Candidate sets the desired final target pressure of 20psig (given in initial conditions).

SAT___ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 6: *Critical X Not Critical

[10] **WHEN** Cooldown is ready to commence, **THEN**

[10.1] **VERIFY** Reactor Pressure is stable and being controlled by EHC Pressure Control with at least one Bypass Valve opened. (Adjust setpoint as necessary)

* [10.2] **DEPRESS** the "START" button on the Auto Cooldown Display Screen.

*[11] **WHEN** Caution "Are You Sure You Want to Initiate Auto Cooldown?" appears

SELECT "Yes" Screen Button to start the cooldown.

Standard:

Candidate depresses START and acknowledges "YES' to commence auto cooldown.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical Not Critical X

[12] **CHECK** the following:

- EHC PRESSURE SETPOINT, 2-PI-47-162, is lowering.
- EHC AUTO COOLDOWN displays "IN PROGRESS"

Standard:

Candidate monitors EHC pressure and the auto cooldown is "IN PROGRESS".

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The Unit Supervisor directs you to adjust the Final Pressure Target to 100 psig.

****

Performance Step 8: Critical X Not Critical

[13] **IF** it is desired to change the Final Pressure Target, **THEN** On the Auto Cooldown Screen.

[13.1] **SELECT** the block above the "FINAL PRESSURE TARGET"

[13.2] **ENTER** the desired pressure using the Display Screen or Key Board.

[13.3] **WHEN** desired Pressure is entered **SELECT** "OK"

Standard:

Candidate adjusts "FINAL PRESSURE TARGET" to 100 psig and recommences the auto cooldown.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Another operator will continue to monitor the cooldown. This completes your task.

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: d

TASK NUMBER: U-000-NO-32

TASK TITLE: EHC Auto Cooldown

K/A NUMBER: 239001 A4.09 K/A RATING: RO 3.9 SRO 3.9

PRA:

TASK STANDARD: Perform Cooldown with EHC Auto Cooldown Program

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-OI-47

VALIDATION TIME: 10 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. The Plant has been shutdown in preparation for a refueling outage. The Main Turbine is tripped. Reactor Water Level is stable and under control. Reactor Pressure is stable and being controlled by bypass.

INITIATING CUES: The Unit Supervisor directs you to commence an Auto Cooldown to 20 psig in accordance with 3-OI-47, Turbine-Generator System, Section 8.1.2, starting at step [6].

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect, if applicable). When you have completed your assigned task, you will say "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. The Plant has been shutdown in preparation for a refueling outage. The Main Turbine is tripped. Reactor Water Level is stable and under control. Reactor Pressure is stable and being controlled by bypass.

INITIATING CUES: The Unit Supervisor directs you to commence an Auto Cooldown to 20 psig in accordance with 3-OI-47, Turbine-Generator System, Section 8.1.2, starting at step [6].

START TIME_____

Examiner Note: This JPM requires Reactor Water Level Control with RFPT C in manual.

NOTES

1) When using the EHC Auto Cooldown program, injecting water into the Reactor Vessel using the Reactor Feed Pumps at a rapid rate will cause the Bypass Valve to go closed. The Bypass valves will slowly reopen to maintain the cooldown rate based upon a calculated cooldown chart.

2) When using the EHC Auto Cooldown program, the Bypass Valve Jack can still be used to open the Bypass Valves, if the Bypass Valve Jack setpoint is not set at zero, then the Bypass valves may not go fully close and could cause exceeding the Programmed Cooldown Rate.

3) A dedicated operator should be established to control Reactor Water Level. To minimize large fluctuations in level, the Reactor Feed Pumps should be in manual.

****

Performance Step 1: Critical _ Not Critical X

8.1.2 EHC Automatic Cooldown Program

[1] **OBTAIN** Unit Supervisor Permission to perform Reactor Cooldown using the EHC Automatic Cooldown Program.

[2] **REVIEW** P&L for Auto Cooldown Controls.

[3] **VERIFY** the Main Turbine is tripped.

[4] **VERIFY** Reactor Water Level is stable and under control.

[5] **VERIFY** Reactor Pressure is stable and being controlled by the Bypass Valves.

Standard:

Steps are complete in accordance with the initiating cue

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical _ Not Critical X

8.1.2 EHC Automatic Cooldown Program

[6] **VERIFY** EHC is in Pressure Control using 3-HS-47-204.

Standard:

Candidate verifies EHC is in pressure control using 3-HS-47-204.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: *Critical X Not Critical

[7] On the EHC Work Station on Panel 9-7:

[7.1] **SELECT** Main Menu from the toolbar at bottom of the screen.

*[7.2] **SELECT** Log In on Display Screen and **ENTER** "OPS" for name and "OPS" for Password.

*[7.3] **SELECT** Auto Cooldown from list of function on the screen.

Standard:

Candidate logs into EHC workstation and selects Auto Cooldown from the list of functions on the screen.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical _ Not Critical X

[8] On the Auto Cooldown Display Screen

CHECK the following are displayed.

- Turbine Tripped or All Valves Closed - indicates Reset.
- Rx Press Ctrl - indicates Reset.

Standard:

Candidate checks the Turbine Tripped or All Valves Closed - indicates Reset.
Candidate checks Rx Press Ctrl - indicates Reset.

SAT__ UNSAT___ N/A ___COMMENTS:_____
_____

****

Performance Step 5: Critical X Not Critical

[9] On the Auto Cooldown Screen
SET the desired Final Pressure for cooldown as follows:

[9.1] **SELECT** the block above the "FINAL PRESSURE TARGET".

[9.2] **ENTER** the desired pressure using the Display Screen or Key Board.

[9.3] **WHEN** desired Pressure is entered **SELECT** "OK"

Standard:

Candidate sets the desired final target pressure of 20psig (given in initial conditions).

SAT__ UNSAT___ N/A ___COMMENTS:_____
_____

****

Performance Step 6: Critical X Not Critical

[10] **WHEN** Cooldown is ready to commence, **THEN**
DEPRESS the "START" button on the Auto Cooldown Display Screen.

[11] **WHEN** Caution "Are You Sure You Want to Initiate Auto Cooldown?" appears
SELECT "Yes" Screen Button to start the cooldown.

Standard:

Candidate depresses START and acknowledges "YES' to commence auto cooldown.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical _ Not Critical X

[12] **CHECK** the following :

- EHC PRESSURE SETPOINT, 3-PI-47-162, is lowering.
- EHC AUTO COOLDOWN displays "IN PROGRESS"

Standard:

Candidate monitors EHC pressure and the auto cooldown is "IN PROGRESS".

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The Unit Supervisor directs you to adjust the Final Pressure Target to 100 psig.

****

Performance Step 8: Critical _ Not Critical X

[13] **IF** it is desired to change the Final Pressure Target, **THEN**
On the Auto Cooldown Screen. (Otherwise N/A)

[13.1] **SELECT** the block above the "FINAL PRESSURE TARGET"

[13.2] **ENTER** the desired pressure using the Display Screen or Key Board.

[13.3] **WHEN** desired Pressure is entered **SELECT** "OK"

Standard:

Candidate adjusts "FINAL PRESSURE TARGET" to 100 psig and recommences the auto cooldown.

SAT___ UNSAT___ N/A ___COMMENTS:_____
_____

CUE: Another operator will continue to monitor the cooldown. This completes your task.

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: **e-ALTERNATE PATH**

TASK NUMBER: U-000-EM-63

TASK TITLE: 2-EOI-Appendix-13 Emergency Venting Primary Containment

K/A NUMBER: 295024 EA2.01 K/A RATING: RO 4.2 SRO 4.4

TASK STANDARD: 2-EOI-Appendix-13 complete with Drywell Pressure restored and maintained below 55 psig

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-EOI-Appendix-13

VALIDATION TIME: 10 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an operator. A large leak inside Primary Containment has developed on Unit 2. The Reactor has been scrammed and several control rods are not fully inserted. Primary containment pressure has exceeded the PSP curve (curve 6) and is approaching 55 psig and rising.

INITIATING CUE: The Unit Supervisor directs you to emergency vent Primary Containment as directed by 2-EOI Appendix 13 and maintain Primary Containment pressure below 55 psig

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an operator. A large leak inside Primary Containment has developed on Unit 2. The Reactor has been scrammed and several control rods are not fully inserted. Primary containment pressure has exceeded the PSP curve (curve 6) and is approaching 55 psig and rising.

INITIATING CUE: The Unit Supervisor directs you to emergency vent Primary Containment as directed by 2-EOI Appendix 13 and maintain Primary Containment pressure below 55 psig

Simulator Driver: This JPM may require RHR injection for level control

START TIME_____

****

Performance Step 1: Critical _ Not Critical X

1. **NOTIFY** Shift Manager / SED of the following:

   - Emergency Venting of Primary Containment is in progress.
   - Off-Gas Release Rate Limits will be exceeded.

Standard:

Operator notifies Shift Manager/SED

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: As Shift Manager/SED acknowledge report that Emergency Primary Containment Venting is in progress and Off-Gas release limits will be exceeded

****

Performance Step 2: Critical _ Not Critical X

2. **VENT** the Suppression Chamber as follows (Panel 9-3):

a. IF EITHER of the following exists:

- Suppression Pool water level CANNOT be determined to be below 20 ft,

OR

- Suppression Chamber CANNOT be vented,

THEN **CONTINUE** in this procedure at Step 3.

Standard:

Operator verifies Suppression Pool level below 20 ft using 2-LI-64-159A and does not continue to step 3

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical _ Not Critical X

b. **PLACE** keylock switch 2-HS-64-222B, HARDENED SUPPR CHBR VENT OUTBD PERMISSIVE, in PERM.

Standard:

Operator places 2-HS-64-222B in the PERM position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical _ Not Critical X

c. **CHECK** blue indicating light above 2-HS-64-222B, HARDENED SUPPR CHBR VENT OUTBD PERMISSIVE, illuminated.

Standard:

Operator verifies BLUE indicating lamp above 2-HS-64-222B Illuminated

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

ALTERNATE PATH STARTS ON NEXT STEP

****

Performance Step 5: Critical _ Not Critical X

d. **OPEN** 2-FCV-64-222, HARDENED SUPPR CHBR VENT OUTBD ISOL VLV.

Standard:

Operator places 2-HS-64-222A in the OPEN position and determines valve cannot be opened. Operator proceeds to step 3 by direction of step 2.a

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical _ Not Critical X

3. IF Suppression Chamber vent path is NOT available, THEN **VENT** the Drywell as follows:

   a. **NOTIFY** Shift Manager / SED that Secondary Containment integrity failure is possible.

   b. **NOTIFY** Radiation Protection that Reactor Building is being evacuated due to imminent failure of Primary Containment vent ducts.

   c. **EVACUATE** ALL Reactor Buildings using P.A. System.

Standard:

Operator notifies the SM/SED that containment integrity failure is possible, notifies RP that the Reactor Building will be evacuated due to imminent failure of Primary Containment vent ducts, and makes P.A. announcement to evacuate Reactor Building.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	**As SM/SED acknowledge report of possible containment integrity failure, As RP acknowledge report of Reactor Building evacuation due to imminent failure of Primary Containment vent ducts.**

****

Performance Step 7: Critical _ Not Critical X

d. **START** ALL available SGTS trains.

Standard:

Operator determines that all trains of SGTS are already in service

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8: Critical _ Not Critical X

e. **VERIFY CLOSED** 2-FCV-64-36, DW/SUPPR CHBR VENT TO SGT (Panel 9-3)

Standard:

Operator verifies 2-FCV-64-36 is closed on Panel 9-3

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical X Not Critical

f. **VERIFY OPEN** the following dampers (Panel 9-25):

- 2-FCO-64-40, REACTOR ZONE EXH TO SGTS
- 2-FCO-64-41, REACTOR ZONE EXH TO SGTS

Standard:

Operator places control switches for dampers 2-FCO-64-40 and 2-FCO-64-41 to the open position on Panel 9-25

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical _ Not Critical X

g. **VERIFY CLOSED** 2-FCV-64-29, DRYWELL VENT INBD ISOL VALVE (Panel 9-3 or Panel 9-54).

Standard:

Operator verifies 2-FCV-64-29 is closed on Panel 9-3 or Panel 9-54

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 11: *Critical X Not Critical

*h. **DISPATCH** personnel to Unit 2 Auxiliary Instrument Room to perform the following:

1) **REFER TO** Attachment 1 and **OBTAIN** one 12-in. banana jack jumper from EOI Equipment Storage Box.

2) **LOCATE** terminal strip DD in Panel 9-43, Front.

3) **JUMPER** DD-76 to DD-77 (Panel 9-43).

4) **NOTIFY** Unit Operator that jumper for 2-FCV-64-30, DRYWELL VENT OUTBD ISOLATION VLV, is in place.

Standard:

Operator contacts an AUO or an extra operator to perform step h.1) thru h.4)

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: When contacted to perform step h.1) thru h.4) provide repeat back and inform operator that the Jumper for 2-FCV-64-30 is in place

****

Performance Step 12: Critical X Not Critical

i. **VERIFY OPEN** 2-FCV-64-30, DRYWELL VENT OUTBD ISOLATION VLV (Panel 9-3).

Standard:

Operator opens 2-FCV-64-30 on panel 9-3

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13: Critical X Not Critical

CAUTION

- The following step will fail ductwork inside Secondary Containment and may fail Secondary Containment Integrity.
- Off-Gas Release Rate Limits will be exceeded.

j. **PLACE** keylock switch 2-HS-84-36, SUPPR CHBR/DW VENT ISOL BYP SELECT, to DRYWELL (Panel 9-54).

Standard:

Operator places keylock switch 2-HS-84-36 to the DRYWELL position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 14: Critical _ Not Critical X

k. **VERIFY OPEN** 2-FCV-64-29, DRYWELL VENT INBD ISOL VALVE (Panel 9-54).

Standard:

Operator verifies that 2-FCV-64-29 opens on Panel 9-54

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 15: Critical _ Not Critical X

l. **CHECK** Drywell and Suppression Chamber pressure lowering.

m. **MAINTAIN** Primary Containment pressure below 55 psig using 2-FCV-64-29, DRYWELL VENT INBD ISOL VALVE, as directed by SRO.

Standard:

Operator checks that Drywell and Suppression Chamber pressure are lowering and informs SRO that Emergency Venting of the Drywell is in progress

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	**As SRO acknowledge report of emergency venting of Drywell in progress. JPM complete**

END OF TASK

STOP TIME_____

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: e-**ALTERNATE PATH**

TASK NUMBER: U-000-EM-63

TASK TITLE: 3-EOI-Appendix-13 Emergency Venting Primary Containment

K/A NUMBER: 295024 EA2.01 K/A RATING: RO 4.2 SRO 4.4

TASK STANDARD: 3-EOI-Appendix-13 complete with Drywell Pressure restored and maintained below 55 psig

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-EOI-Appendix-13

VALIDATION TIME: 10 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an operator. A large leak inside Primary Containment has developed on Unit 3. The Reactor has been scrammed and several control rods are not fully inserted. Primary containment pressure has exceeded the PSP curve (curve 6) and is approaching 55 psig and rising.

INITIATING CUE: The Unit Supervisor directs you to emergency vent Primary Containment as directed by 3-EOI Appendix 13 and maintain Primary Containment pressure below 55 psig

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an operator. A large leak inside Primary Containment has developed on Unit 3. The Reactor has been scrammed and several control rods are not fully inserted. Primary containment pressure has exceeded the PSP curve (curve 6) and is approaching 55 psig and rising.

INITIATING CUE: The Unit Supervisor directs you to emergency vent Primary Containment as directed by 3-EOI Appendix 13 and maintain Primary Containment pressure below 55 psig

Simulator Driver: **This JPM may require RHR injection for level control**

START TIME_____

****

Performance Step 1: Critical _ Not Critical X

1. **NOTIFY** Shift Manager / SED of the following:

   - Emergency Venting of Primary Containment is in progress.
   - Off-Gas Release Rate Limits will be exceeded.

Standard:

Operator notifies Shift Manager/SED

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: **As Shift Manager/SED acknowledge report that Emergency Primary Containment Venting is in progress and Off-Gas release limits will be exceeded**

****

Performance Step 2: Critical _ Not Critical X

2. **VENT** the Suppression Chamber as follows (Panel 9-3):

a. IF EITHER of the following exists:

- Suppression Pool water level CANNOT be determined to be below 20 ft,

OR

- Suppression Chamber CANNOT be vented,

THEN **CONTINUE** in this procedure at Step 3.

Standard:

Operator verifies Suppression Pool level below 20 ft using 3-LI-64-159A and does not continue to step 3

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical _ Not Critical X

b. **PLACE** keylock switch 3-HS-64-222B, HARDENED SUPPR CHBR VENT OUTBD PERMISSIVE, in PERM.

Standard:

Operator places 3-HS-64-222B in the PERM position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical _ Not Critical X

c. **CHECK** blue indicating light above 3-HS-64-222B, HARDENED SUPPR CHBR VENT OUTBD PERMISSIVE, illuminated.

Standard:

Operator verifies BLUE indicating lamp above 3-HS-64-222B Illuminated

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

ALTERNATE PATH STARTS ON NEXT STEP

****

Performance Step 5: Critical _ Not Critical X

d. **OPEN** 3-FCV-64-222, HARDENED SUPPR CHBR VENT OUTBD ISOL VLV.

Standard:

Operator places 3-HS-64-222A in the OPEN position and determines valve cannot be opened. Operator proceeds to step 3 by direction of step 2.a

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical _ Not Critical X

3. IF Suppression Chamber vent path is NOT available, THEN **VENT** the Drywell as follows:

   a. **NOTIFY** Shift Manager / SED that Secondary Containment integrity failure is possible.

   b. **NOTIFY** Radiation Protection that Reactor Building is being evacuated due to imminent failure of Primary Containment vent ducts.

   c. **EVACUATE** ALL Reactor Buildings using P.A. System.

Standard:

Operator notifies the SM/SED that containment integrity failure is possible, notifies RP that the Reactor Building will be evacuated due to imminent failure of Primary Containment vent ducts, and makes P.A. announcement to evacuate Reactor Building.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	**As SM/SED acknowledge report of possible containment integrity failure, As RP acknowledge report of Reactor Building evacuation due to imminent failure of Primary Containment vent ducts.**

****

Performance Step 7: Critical _ Not Critical X

d. **START** ALL available SGTS trains.

Standard:

Operator determines that all trains of SGTS are already in service

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8: Critical _ Not Critical X

e. **VERIFY CLOSED** 3-FCV-64-36, DW/SUPPR CHBR VENT TO SGT (Panel 9-3)

Standard:

Operator verifies 3-FCV-64-36 is closed on Panel 9-3

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical X Not Critical

f. **VERIFY OPEN** the following dampers (Panel 9-25):

- 3-FCO-64-40, REACTOR ZONE EXH TO SGTS
- 3-FCO-64-41, REACTOR ZONE EXH TO SGTS

Standard:

Operator places control switches for dampers 3-FCO-64-40 and 3-FCO-64-41 to the open position on Panel 9-25

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical _ Not Critical X

g. **VERIFY CLOSED** 3-FCV-64-29, DRYWELL VENT INBD ISOL VALVE (Panel 9-3 or Panel 9-54).

Standard:

Operator verifies 3-FCV-64-29 is closed on Panel 9-3 or Panel 9-54

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: *Critical X Not Critical

*h. **DISPATCH** personnel to Unit 3 Auxiliary Instrument Room to perform the following:

1) **REFER TO** Attachment 1 and **OBTAIN** one 12-in. banana jack jumper from EOI Equipment Storage Box.

2) **LOCATE** terminal strip DD in Panel 3-9-43, Front.

3) **JUMPER** DD-76 to DD-77 (Panel 3-9-43).

4) **NOTIFY** Unit Operator that jumper for 3-FCV-64-30, DRYWELL VENT OUTBD ISOLATION VLV, is in place.

Standard:

Operator contacts an AUO or an extra operator to perform step h.1) thru h.4)

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: When contacted to perform step h.1) thru h.4) provide repeat back and inform operator that the Jumper for 3-FCV-64-30 is in place

****

Performance Step 12: Critical X Not Critical

i. **VERIFY OPEN** 3-FCV-64-30, DRYWELL VENT OUTBD ISOLATION VLV (Panel 9-3).

Standard:

Operator opens 3-FCV-64-30 on panel 9-3

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 13: Critical X Not Critical

CAUTION

- The following step will fail ductwork inside Secondary Containment and may fail Secondary Containment Integrity.
- Off-Gas Release Rate Limits will be exceeded.

j. **PLACE** keylock switch 3-HS-84-36, SUPPR CHBR/DW VENT ISOL BYP SELECT, to DRYWELL (Panel 9-54).

Standard:

Operator places keylock switch 3-HS-84-36 to the DRYWELL position

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 14: Critical _ Not Critical X

k. **VERIFY OPEN** 3-FCV-64-29, DRYWELL VENT INBD ISOL VALVE (Panel 9-54).

Standard:

Operator verifies that 3-FCV-64-29 opens on Panel 9-54

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 15: Critical _ Not Critical X

l. **CHECK** Drywell and Suppression Chamber pressure lowering.

m. **MAINTAIN** Primary Containment pressure below 55 psig using 3-FCV-64-29, DRYWELL VENT INBD ISOL VALVE, as directed by SRO.

Standard:

Operator checks that Drywell and Suppression Chamber pressure are lowering and informs SRO that Emergency Venting of the Drywell is in progress

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	**As SRO acknowledge report of emergency venting of Drywell in progress. JPM complete**

END OF TASK

STOP TIME_____

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: f

TASK NUMBER: U-000-SS-25

TASK TITLE: Parallel Diesel Generator with Offsite Source

K/A NUMBER: 264000 A4.04 K/A RATING: RO 3.7 SRO 3.7

TASK STANDARD: Parallel the A Diesel Generator with the Offsite Source in accordance with 0-OI-82, Standby Diesel generator System and load Diesel to 1300±50kW.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 0-OI-82

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED:

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS:

You are an Operator on Unit 2; the plant is operating at rated power. The A Diesel Generator has been started per 0-OI-82, 5 minutes ago. An Assistant Unit Operator is on station at the Diesel Generator.

INITIATING CUE:

The Unit Supervisor directs you to parallel the A Diesel Generator with the offsite source by performing 0-OI-82, Section 8.1, Parallel with System Operation at Panel 9-23, starting at step 8.1 [2]. Load the DG to 1300±50kW.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS:

You are an Operator on Unit 2; the plant is operating at rated power. The A Diesel Generator has been started per 0-OI-82, 5 minutes ago. An Assistant Unit Operator is on station at the Diesel Generator.

INITIATING CUE:

The Unit Supervisor directs you to parallel the A Diesel Generator with the offsite source by performing 0-OI-82, Section 8.1, Parallel with System Operation at Panel 9-23, starting at step 8.1 [2]. Load the DG to 1300±50kW.

START TIME_____

****

Performance Step 1: Critical X Not Critical

CAUTION
A failure of a PT Transformer may cause the associated DG to overspeed when paralleled with the System.

[2] **PLACE** the associated Diesel Generator breaker synchronizing switch in ON.

Diesel	Instrument Name	Instrument No.	Panel
A	DG A BKR 1818 SYNC	0-25-211-A/22A	0-9-23-7

Standard:

Places Diesel Generator breaker synchronizing switch, DG A BKR 1818 SYNC, in ON.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical __ Not Critical X

[3] **CHECK** that 4-kV Shutdown Board A(B,C,D) voltage is between 3950 VOLTs and 4400 VOLTs and **NOT** undergoing abnormal voltage transients.

Standard:

Checks voltage between 3950V and 4400V and NOT undergoing abnormal transients.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical __ Not Critical X_

[4] **CHECK** SYSTEM SYNC FREQUENCY is between 59 HERTZ and 61 HERTZ and **NOT** undergoing abnormal frequency transients.

Standard:

Checks frequency between 59Hz and 61Hz and NOT undergoing abnormal transients

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical _ Not Critical X

CAUTION
DO NOT parallel the Diesel Generators with an unstable offsite source or during inclement weather (e.g., lightning, heavy winds).

[5] **IF** 4-kV Shutdown Board A(B,C,D) is experiencing abnormal voltage/frequency transients, **THEN**

PERFORM the following:

[5.1] **PLACE** the associated Diesel Generator breaker synchronizing switch in OFF.

Standard:

Step is N/A, no abnormal voltage/frequency transients.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical X Not Critical

CAUTION
Only one Unit 1 and 2 Diesel Generator at a time is allowed to be operated in parallel with system.

[6] **PULL and PLACE** the associated Diesel Generator mode selector switch in PARALLELED WITH SYSTEM.

Diesel	Handswitch Name	Handswitch No.	Panel
A	DG A MODE SELECT	0-HS-82-A/5A	0-9-23-7

Standard:

Pulls and places Diesel Generator mode selector switch in PARALLELED WITH SYSTEM.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

CAUTION
Failure of the PARALLELED WITH SYSTEM light to illuminate in the following step could indicate that the DG is still in SINGLE UNIT operation and result in overload when the DG output breaker is closed.

[7] **RELEASE** the Diesel Generator MODE SELECT switch **and OBSERVE** the PARALLELED WITH SYSTEM light illuminated.

Standard:

Releases Diesel Generator mode selector switch and observes PARALLELED WITH SYSTEM light illuminated.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical __ Not Critical X

[8] **ADJUST** Diesel Generator frequency using the associated Diesel Generator governor control switch to obtain a synchroscope needle rotation of one revolution every 15 to 20 seconds in the FAST direction.

Diesel	Handswitch Name	Handswitch No.	Panel
A	DG A GOVERNOR CONTROL	0-HS-82-A/3A	0-9-23-7

Standard:

Adjusts Diesel Generator frequency using the Diesel Generator governor control switch to obtain a synchroscope needle rotation of one revolution every 15 to 20 seconds in the FAST direction.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8: Critical __ Not Critical X

[9] **USE** the associated Diesel Generator Voltage Regulator Control switch to match Diesel Generator and System voltages.

Diesel	Handswitch Name	Handswitch No.	Panel
A	DG A VOLT REGULATOR CONT	0-HS-82-A/2A	0-9-23-7
	GEN SYNC REF VOLTAGE	0-EI-82-AB	
	SYSTEM SYNC REF VOLTAGE	0-EI-211-AB	

Standard:

Matches Diesel Generator and System voltages.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical X Not Critical __

[10] **WHEN** the synchroscope needle is approximately 2 minutes on the left hand side of the 12 o'clock position, **THEN**

PLACE the associated Diesel Generator breaker handswitch in CLOSE.

Diesel	Handswitch Name	Handswitch No.	Panel
A	DG A BKR 1818	0-HS-211-A/22A	0-9-23-7

Standard:

Places DG breaker in CLOSE and verifies DG Breaker 1818 closes.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical __ Not Critical X

[11] **PLACE** the associated Diesel Generator breaker synchronizing switch in OFF.

Diesel	Instrument Name	Instrument No.	Panel
A	DG A BKR 1818 SYNC	0-25-211-A/22A	0-9-23-7

Standard:

Places the associated Diesel Generator breaker synchronizing switch in OFF.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical ___ Not Critical X

NOTE
If diesel operates greater than 4 hours at less than 50% load, the diesel should be loaded to full load for at least 30 minutes prior to engine shutdown. This will allow the engine to clean out any oil accumulations from the exhaust manifolds.

[12] **IF** DG has been operating at a low-load condition (≤50%) for an extended period of time (≥4 hours) **THEN PERFORM** the following (Otherwise N/A):

[12.1] **USE** the associated Diesel Generator's governor control switch and voltage regulator control switch to **INCREASE** kW and kVAR load, in increments of 100kW every 15 minutes.

Diesel	Instrument Name	Instrument No.	Panel
A	DG A GOVERNOR CONTROL	0-HS-82-A/3A	0-9-23-7
	DG A VOLT REGULATOR CONT	0-HS-82-A/2A	

Standard:

This step is N/A.

SAT___ UNSAT___ N/A ___COMMENTS:_____
_____

****

Performance Step 12: Critical X Not Critical __

NOTE

Lagging VARs should be maintained when adjusting kW load (rising or lowering). This may require kW load adjustment to be stopped periodically to allow for adjusting kVAR load. Once desired kW load is achieved, Illustration 1 should be referred to for determination of kVAR loading required to obtain a power factor (pf) of 0.8 lagging. Diesel generator kVAR load should then be adjusted to obtain a 0.8 pf lagging. **IF** system conditions will not permit the kVAR loading required to obtain a 0.8 pf lagging, **THEN** kVAR load should be adjusted to the maximum kVAR lagging the system will allow.

[13] **USE** the associated Diesel Generator's governor control switch and voltage regulator control switch to obtain desired kW and kVAR load.

Diesel	Instrument Name	Instrument No.	Panel
A	DG A GOVERNOR CONTROL	0-HS-82-A/3A	0-9-23-7
	DG A VOLT REGULATOR CONT	0-HS-82-A/2A	

Standard:

Uses the associated Diesel Generator's governor control switch and voltage regulator control switch to raise kW and kVAR load.
Loading should be 1300±50kW and 975±50kVAR per Illustration 1

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: f

TASK NUMBER: U-000-SS-25

TASK TITLE: Parallel Diesel Generator with Offsite Source

K/A NUMBER: 264000 A4.04 K/A RATING: RO 3.7 SRO 3.7

TASK STANDARD: Parallel the 3A Diesel Generator with the Offsite Source in accordance with 3-OI-82, Standby Diesel generator System and load Diesel to 1300±50kW.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-OI-82

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED:

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS:

You are an Operator on Unit 3; the plant is operating at rated power. The 3A Diesel Generator has been started per 3-OI-82, 5 minutes ago. An Assistant Unit Operator is on station at the Diesel Generator.

INITIATING CUE:

The Unit Supervisor directs you to parallel the 3A Diesel Generator with the offsite source by performing 3-OI-82, Section 8.1, Parallel with System Operation at Panel 9-23, starting at step 8.1 [2]. Load the DG to 1300±50kW.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS:

You are an Operator on Unit 3; the plant is operating at rated power. The 3A Diesel Generator has been started per 3-OI-82, 5 minutes ago. An Assistant Unit Operator is on station at the Diesel Generator.

INITIATING CUE:

The Unit Supervisor directs you to parallel the 3A Diesel Generator with the offsite source by performing 3-OI-82, Section 8.1, Parallel with System Operation at Panel 9-23, starting at step 8.1 [2]. Load the DG to 1300±50kW.

START TIME_____

****

Performance Step 1: Critical X Not Critical

CAUTION
A failure of a PT Transformer may cause the associated DG to overspeed when paralleled with the System.

[2] **PLACE** the associated Diesel Generator breaker synchronizing switch in ON.

Diesel	Instrument Name	Instrument No.	Panel
3A	DG 3A BKR 1838 SYNC	3-25-211-3EA/9A	3-9-23

Standard:

Places Diesel Generator breaker synchronizing switch, DG 3A BKR 1838 SYNC, in ON.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 2: Critical __ Not Critical X

[3] **CHECK** that 4-kV Shutdown Board 3EA(3EB,3EC,3ED) voltage is between 3950 VOLTs and 4400 VOLTs and **NOT** undergoing abnormal voltage transients.

Standard:

Checks voltage between 3950V and 4400V and NOT undergoing abnormal transients.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 3: Critical ___ Not Critical X

[4] **CHECK** SYSTEM SYNC FREQUENCY is between 59 HERTZ and 61 HERTZ and **NOT** undergoing abnormal frequency transients.

Standard:

Checks frequency between 59Hz and 61Hz and NOT undergoing abnormal transients

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical _ Not Critical X

CAUTION
DO NOT parallel the Diesel Generators with an unstable offsite source or during inclement weather (e.g., lightning, heavy winds).

[5] **IF** 4-kV Shutdown Board 3EA(3EB,3EC,3ED) is experiencing abnormal voltage/frequency transients, **THEN**

PERFORM the following:

[5.1] **PLACE** the associated Diesel Generator breaker synchronizing switch in OFF.

Standard:

Step is N/A, no abnormal voltage/frequency transients.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical X Not Critical

CAUTION
Only one Unit 1 and 2 Diesel Generator at a time is allowed to be operated in parallel with system.

[6] **PULL and PLACE** the associated Diesel Generator mode selector switch in PARALLELED WITH SYSTEM.

Diesel	Handswitch Name	Handswitch No.	Panel
3A	DG 3A MODE SELECT	3-HS-82-3A/5A	3-9-23

Standard:

Pulls and places Diesel Generator mode selector switch in PARALLELED WITH SYSTEM.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

CAUTION
Failure of the PARALLELED WITH SYSTEM light to illuminate in the following step could indicate that the DG is still in SINGLE UNIT operation and result in overload when the DG output breaker is closed.

[7] **RELEASE** the Diesel Generator MODE SELECT switch **and OBSERVE** the PARALLELED WITH SYSTEM light illuminated.

Standard:

Releases Diesel Generator mode selector switch and observes PARALLELED WITH SYSTEM light illuminated.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 7: Critical __ Not Critical X

[8] **ADJUST** Diesel Generator frequency using the associated Diesel Generator governor control switch to obtain a synchroscope needle rotation of one revolution every 15 to 20 seconds in the FAST direction.

Diesel	Handswitch Name	Handswitch No.	Panel
3A	DG 3A GOVERNOR CONTROL	3-HS-82-3A/3A	3-9-23

Standard:

Adjusts Diesel Generator frequency using the Diesel Generator governor control switch to obtain a synchroscope needle rotation of one revolution every 15 to 20 seconds in the FAST direction.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 8: Critical __ Not Critical X

[9] **USE** the associated Diesel Generator Voltage Regulator Control switch to match Diesel Generator and System voltages.

Diesel	Handswitch Name	Handswitch No.	Panel
3A	DG 3A VOLT REGULATOR CONT	3-HS-82-3A/2A	3-9-23
	GEN SYNC REF VOLTAGE	3-EI-82-3AB	
	SYSTEM SYNC REF VOLTAGE	3-EI-211-3EAB/B	

Standard:

Matches Diesel Generator and System voltages.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 9: Critical X Not Critical __

[10] **WHEN** the synchroscope needle is approximately 2 minutes on the left hand side of the 12 o'clock position, **THEN**

PLACE the associated Diesel Generator breaker handswitch in CLOSE.

Diesel	Handswitch Name	Handswitch No.	Panel
3A	DG 3A BKR 1838	3-HS-211-3EA/9A	3-9-23

Standard:

Places DG breaker in CLOSE and verifies DG Breaker 1838 closes.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical __ Not Critical X

[11] **PLACE** the associated Diesel Generator breaker synchronizing switch in OFF.

Diesel	Instrument Name	Instrument No.	Panel
3A	DG 3A BKR 1838 SYNC	3-25-211-3EA/9A	3-9-23

Standard:

Places the associated Diesel Generator breaker synchronizing switch in OFF.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical ___ Not Critical X

NOTE
If diesel operates greater than 4 hours at less than 50% load, the diesel should be loaded to full load for at least 30 minutes prior to engine shutdown. This will allow the engine to clean out any oil accumulations from the exhaust manifolds.

[12] **IF** DG has been operating at a low-load condition (≤50%) for an extended period of time (≥4 hours) **THEN PERFORM** the following (Otherwise N/A):

[12.1] **USE** the associated Diesel Generator's governor control switch and voltage regulator control switch to **INCREASE** kW and kVAR load, in increments of 100kW every 15 minutes.

Diesel	Instrument Name	Instrument No.	Panel
3A	DG 3A GOVERNOR CONTROL	3-HS-82-3A/3A	3-9-23
	DG 3A VOLT REGULATOR CONT	3-HS-82-3A/2A	

Standard:

This step is N/A.

SAT___ UNSAT___ N/A ___COMMENTS:_____
_____

****

Performance Step 12: Critical X Not Critical __

NOTE
Lagging VARs should be maintained when adjusting kW load (rising or lowering). This may require kW load adjustment to be stopped periodically to allow for adjusting kVAR load. Once desired kW load is achieved, Illustration 1 should be referred to for determination of kVAR loading required to obtain a power factor (pf) of 0.8 lagging. Diesel generator kVAR load should then be adjusted to obtain a 0.8 pf lagging. **IF** system conditions will not permit the kVAR loading required to obtain a 0.8 pf lagging, **THEN** kVAR load should be adjusted to the maximum kVAR lagging the system will allow.

[13] **USE** the associated Diesel Generator's governor control switch and voltage regulator control switch to obtain desired kW and kVAR load.

Diesel	Instrument Name	Instrument No.	Panel
3A	DG 3A GOVERNOR CONTROL	3-HS-82-3A/3A	3-9-23
	DG 3A VOLT REGULATOR CONT	3-HS-82-3A/2A	

Standard:

Uses the associated Diesel Generator's governor control switch and voltage regulator control switch to raise kW and kVAR load.
Loading should be 1300±50kW and 975±50kVAR per Illustration 1

SAT__ UNSAT__ N/A __COMMENTS:_____
_____

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: g-**ALTERNATE PATH**

TASK NUMBER: U-066-AB-02

TASK TITLE: Respond to Off-Gas Post-Treatment Radiation HI-HI-HI

K/A NUMBER: 271000A2.04 K/A RATING: RO 3.4 SRO 4.1

PRA:

TASK STANDARD: Respond to Off-Gas Post-Treatment Radiation HI-HI-HI
Per 2-ARP-9-4C/35 and 2-AOI-66-2

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-ARP-9-4C/35 and 2-AOI-66-2

VALIDATION TIME: 15 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are a Unit 2 Operator. Unit 2 is at 100% power.

INITIATING CUE: The Unit Supervisor directs you to respond to an OFF-GAS POST-TREATMENT RADIATION HI-HI-HI annunciator, panel 9-4C Window 35

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit 2 Operator. Unit 2 is at 100% power.

INITIATING CUE: The Unit Supervisor directs you to respond to an OFF-GAS POST-TREATMENT RADIATION HI-HI-HI annunciator, panel 9-4C Window 35

START TIME _____

Examiner Note: If candidate goes directly to 2-AOI-66-2, Skip the following performance steps 1 through 3 and continue at performance step 4.

****

Performance Step 1: Critical _ Not Critical X

2-ARP-9-4C window 35

A. **VERIFY** alarm condition on the following:

- OFFGAS RADIATION recorder, 2-RR-90-266 on Panel 2-9-2.
- OG POST-TREATMENT CHAN A RAD MON RTMR radiation monitor, 2-RM-90-266A on Panel 2-9-10.
- OG POST-TREATMENT CHAN B RAD MON RTMR radiation monitor, 2-RM-90-265A on Panel 2-9-10.

Standard:

Candidate verifies alarm condition on 2-RR-90-266 and 2-RM-90-265A & 266A.

SAT ____ UNSAT ____ N/A ____ COMMENTS: _____

_____

ALTERNATE PATH STARTS ON NEXT STEP

(IF CANDIDATE REFERS TO ARP PRIOR TO REFERRING TO AOI)

****

Performance Step 2: Critical X Not Critical

2-ARP-9-4C window 35(continued)

B. **VERIFY** OFF-GAS SYSTEM ISOLATION VALVE, 2-FCV-66-28 has the mechanical restraint **DISENGAGED** and 2-FCV-66-28 is CLOSED.

Standard:

Candidate identifies that 2-FCV-66-28 failed to automatically close on OFF-GAS POST-TREATMENT HI-HI-HI radiation, and places 2-HS-66-28 in close.

Candidate may dispatch AUO locally to verify valve not restrained.

SAT ____ UNSAT ____ N/A ____ COMMENTS: _____

_____

CUE: If asked, 2-FCV-66-28 is not mechanically restrained

****

Performance Step 3: Critical _ Not Critical X

2-ARP-9-4C window 35 (continued)

C. **REFER TO** 2-AOI-66-2.

Standard:

Candidate refers to 2-AOI-66-2.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 4: *Critical X Not Critical

2-AOI-66-2

4.1 Immediate Actions

[1] **IF** scram has **NOT** occurred, **THEN PERFORM** the following:

[1.1] **IF** core flow is above 60%, **THEN REDUCE** core flow to between 50-60%.

*[1.2] **MANUALLY SCRAM** the Reactor. **REFER TO** 2-AOI-100-1.

Standard:

Candidate reduces core flow to between 50-60% with recirc system, manually scrams the Reactor, and refers to 2-AOI-100-1.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: After the candidate has scrammed the reactor and given the scram report, "Another operator will perform the actions of scram procedure; continue the actions of 2-AOI-66-2."

EXAMINERS NOTE: Alternate Path starts here, if candidate refers to 2-AOI-66-2, prior to referring to the ARP

ALTERNATE PATH STARTS ON NEXT STEP

(IF CANDIDATE REFERS TO AOI PRIOR TO REFERRING TO ARP)

****

Performance Step 5: *Critical X Not Critical

4.2 Subsequent Actions

[1] **IF** OFFGAS SYSTEM ISOLATION VALVE, 2-FCV-066-0028 has been mechanically restrained open due to plant conditions, **THEN** **DISENGAGE** 2-FCV-066-0028 mechanical restraint by rotating the restraining handwheel fully in the counterclockwise direction, locally at the stack

*[2] **VERIFY CLOSED** OFFGAS SYSTEM ISOLATION VALVE, 2-FCV-66-28 on Panel 2-9-53 or locally.

Standard:

Candidate identifies that 2-FCV-66-28 failed to automatically close on OFF-GAS POST-TREATMENT HI-HI-HI radiation, and places 2-HS-66-28 in close. Candidate may dispatch AUO locally to verify valve not restrained.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: If asked, 2-FCV-66-28 is not mechanically restrained

****

Performance Step 6: Critical _ Not Critical X

[3] **MONITOR** area radiation levels at Panel 2-9-11.

Standard:

Candidate monitors radiation levels at Panel 2-9-11.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 7: Critical _ Not Critical X

[4] **REFER TO** EPIP-1 for emergency classification level and response.

STANDARD:

Candidate continues to the next step.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: The Shift Manager is implementing EPIP-1 Classification.

****

Performance Step 8: Critical _ Not Critical X

[5] **MONITOR** the following parameters:

A. MAIN STEAM LINE RADIATION, 2-RR-90-135, Panel 2-9-2.

B. OFFGAS RADIATION, 2-RR-90-266, Panel 2-9-2.

C. STACK GAS RADIATION, 0-RR-90-147, Unit 1 Panel 1-9-2.

Standard:

Monitors 2-RR-90-135, 266 on Unit 2 Panel 2-9-2 and calls Unit 1 Operator for a reading on 0-RR-90-147, Unit 1 Panel 1-9-2.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: When Candidate calls Unit 1 Operator for a reading on 0-RR-90-147, Report "STACK GAS RADIATION, 0-RR-90-147 is reading 6 x 10^6 cps."

****

Performance Step 9: Critical X Not Critical

[6] **IF** after five minutes from scram the Offgas Post Treatment activity is **NOT** less than 6 x 10^5 cps as indicated on OFFGAS RADIATION recorder 2-RR-90-266 on Panel 2-9-2, **THEN**

CLOSE all Main Steam Isolation Valves and Main Steam Line Drain Valves, 2-FCV-1-55 and 2-FCV-1-56.

Standard:

Candidate recognizes that the OFF-GAS POST TREATMENT activity is > 6 x 10^5 cps and **CLOSES** ALL Main Steam Isolation Valves. Candidate closes Main Steam Line Drain Valves, 2-FCV-1-55 and 56.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: The Unit has been scrammed for 5 minutes.

NOTE

Placing additional Stack Dilution Air Fans in service should keep 0-RM-90-147 and 0-RM-90-148 on scale.

****

Performance Step 10: Critical X Not Critical

[7] **PLACE** STACK DILUTION FAN SEL control switch, 2-XS-66-29, Panel 2-9-8, in OFF.

Standard:

Places Stack Dilution Fan Sel switch in OFF

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 11: Critical X Not Critical

[8] **START** standby STACK DILUTION FAN 2B(2A) using control switch, 2-HS-66-31A(29A), Panel 2-9-8.

Standard:

Starts the standby Stack Dilution Fan.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 12: Critical _ Not Critical X

[9] **REQUEST** Unit 1 and Unit 3 operators to START standby Stack Dilution Air Fans.

[10] **REQUEST** Chemistry perform 0-SI-4.8.B.2-8, Airborne Effluent Analysis - Stack Noble Gas, to determine activity.

[11] **REQUEST** Chemistry sample reactor water for radioactivity.

Standard:

Requests Unit 1 and 3 start fans, request chemistry support

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: Acknowledge requests

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: g-**ALTERNATE PATH**

TASK NUMBER: U-066-AB-02

TASK TITLE: Respond to Off-Gas Post-Treatment Radiation HI-HI-HI

K/A NUMBER: 271000A2.04 K/A RATING: RO 3.4 SRO 4.1

PRA:

TASK STANDARD: Respond to Off-Gas Post-Treatment Radiation HI-HI-HI
Per 3-ARP-9-4C/35 and 3-AOI-66-2

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-ARP-9-4C/35 and 3-AOI-66-2

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are a Unit 3 Operator. Unit 3 is at 100% power.

INITIATING CUE: The Unit Supervisor directs you to respond to an OFF-GAS POST-TREATMENT RADIATION HI-HI-HI annunciator, panel 9-4C Window 35

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit 3 Operator. Unit 3 is at 100% power.

INITIATING CUE: The Unit Supervisor directs you to respond to an OFF-GAS POST-TREATMENT RADIATION HI-HI-HI annunciator, panel 9-4C Window 35

START TIME _____

Examiner Note: If candidate goes directly to 3-AOI-66-2, Skip the following performance steps 1 through 4 and continue at performance step 5.

****

Performance Step 1: Critical_ Not Critical X

3-ARP-9-4C window 35

A. **VERIFY** alarm condition on the following:

- OFFGAS POST-TREATMENT RADIATION recorder, 3-RR-90-265 on Panel 3-9-2.
- OG POST-TREATMENT CHAN A RAD MON RTMR radiation monitor, 3-RM-90-266A on Panel 3-9-10.
- OG POST-TREATMENT CHAN B RAD MON RTMR radiation monitor, 3-RM-90-265A on Panel 3-9-10.

Standard:

Candidate verifies alarm condition on 3-RR-90-265 and 3-RM-90-265 & 266.

SAT ____ UNSAT ____ N/A ____ COMMENTS: _____

_____

****

Performance Step 2: Critical _ Not Critical X

3-ARP-9-4C window 35(continued)

B. **CHECK** the following is in alarm:

- OFF-GAS ISOLATION VALVE CLOSED, 3-XA-55-7A Window 4.

Standard:

Candidate verifies alarm condition on OFF-GAS ISOLATION VALVE CLOSED, 3-XA-55-7A, Window 4.

SAT ____ UNSAT ____ N/A ____ COMMENTS: _____

_____

ALTERNATE PATH STARTS ON NEXT STEP

(IF CANDIDATE REFERS TO ARP PRIOR TO REFERRING TO AOI)

****

Performance Step 3: Critical X Not Critical

3-ARP-9-4C window 35 (continued)

C. **VERIFY** OFF-GAS SYSTEM ISOLATION VALVE, 3-FCV-66-28 has the mechanical restraint **DISENGAGED** and 3-FCV-66-28 is CLOSED.

Standard:

Candidate identifies that 3-FCV-66-28 failed to automatically close on OFF-GAS POST-TREATMENT HI-HI-HI radiation, and places 3-HS-66-28 in close.

Candidate may dispatch AUO locally to verify valve not restrained.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: If asked, 3-FCV-66-28 is not mechanically restrained

****

Performance Step 4: Critical _ Not Critical X

3-ARP-9-4C window 35 (continued)

D. **REFER TO** 3-AOI-66-2.

Standard:

Candidate refers to 3-AOI-66-2.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 5: *Critical X Not Critical

3-AOI-66-2

4.1 Immediate Actions

[1] **IF** scram has **NOT** occurred, **THEN PERFORM** the following:

[1.1] **IF** core flow is above 60%, **THEN REDUCE** core flow to between 50-60%.

*[1.2] **MANUALLY SCRAM** the Reactor. **REFER TO** 3-AOI-100-1.

Standard:

Candidate reduces core flow to between 50-60% with recirc system, manually scrams the Reactor. Candidate refers to 3-AOI-100-1.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: After the candidate has scrammed the reactor and given the scram report, "Another operator will perform the actions of scram procedure; continue the actions of 3-AOI-66-2.

EXAMINERS NOTE: Alternate Path starts here, if candidate refers to 3-AOI-66-2, prior to referring to the ARP

ALTERNATE PATH STARTS ON NEXT STEP

(IF CANDIDATE REFERS TO AOI PRIOR TO REFERRING TO ARP)

****

Performance Step 6: *Critical X Not Critical

4.2 Subsequent Actions

[1] **IF** OFFGAS SYSTEM ISOLATION VALVE, 3-FCV-066-0028 has been mechanically restrained open due to plant conditions, **THEN** **DISENGAGE** 3-FCV-066-0028 mechanical restraint by rotating the restraining handwheel fully in the counterclockwise direction, locally at the stack (otherwise N/A).

*[2] **VERIFY CLOSED** OFFGAS SYSTEM ISOLATION VALVE, 3-FCV-66-28 on Panel 3-9-53 or locally.

Standard:

Candidate identifies that 3-FCV-66-28 failed to automatically close on OFF-GAS POST-TREATMENT HI-HI-HI radiation, and places 3-HS-66-28 in close. Candidate may dispatch AUO locally to verify valve not restrained.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: If asked, 3-FCV-66-28 is not mechanically restrained

****

Performance Step 7: Critical ___ Not Critical X

[3] **MONITOR** area radiation levels at Panel 3-9-11.

Standard:

Candidate monitors radiation levels at Panel 3-9-11.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 8: Critical ___ Not Critical X

[4] **REFER TO** EPIP-1 for emergency classification level and response.

STANDARD:

Candidate continues to the next step.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: The Shift Manager is implementing EPIP-1 Classification.

****

Performance Step 9: Critical _ Not Critical X

[5] **MONITOR** the following parameters:

A. MAIN STEAM LINE RADIATION, 3-RR-90-135, Panel 3-9-2.

B. OFFGAS PRETREATMENT RADIATION, 3-RR-90-157, Panel 3-9-2.

C. OFFGAS POST-TREATMENT RADIATION, 3-RR-90-265, Panel 3-9-2.

D. STACK GAS RADIATION/CONT RM RADIATION, 0-RR-90-147, on Panel 1-9-2.

Standard:

Monitors 3-RR-90-135, 157, 265, on Unit 3 Panel 3-9-2 and called Unit 1 Operator for a reading on 0-RR-90-147, Unit 1 Panel 1-9-2.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: When Candidate calls Unit 1 Operator for a reading on 0-RR-90-147, Report "STACK GAS RADIATION, 0-RR-90-147 is reading 6 x 10^6 cps."

****

Performance Step 10: Critical X Not Critical

[6] **IF** after five minutes from scram the Offgas Post Treatment activity is **NOT** less than 6 x 10^5 cps as indicated on 3-RR-90-265 on Panel 3-9-2, **THEN**

CLOSE all Main Steam Isolation Valves and Main Steam Line Drain Valves, 3-FCV-001-0055 and 3-FCV-001-0056.

Standard:

Candidate recognizes that the OFF-GAS POST TREATMENT activity is > 6 x 10^5 cps and **CLOSES** ALL Main Steam Isolation Valves. Candidate closes Main Steam Line Drain Valves, 3-FCV-1-55 and 3-FCV-1-56.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: The Unit has been scrammed for 5 minutes.

NOTE

Placing additional Stack Dilution Air Fans in service should keep 0-RM-90-147 and -148 on scale.

****

Performance Step 11: Critical X Not Critical

[7] **PLACE** STACK DILUTION FAN SEL control switch, 3-XS-66-29, Panel 3-9-8, in OFF.

Standard:

Places Stack Dilution fan Sel switch in OFF

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 12: Critical X Not Critical

[8] **START** standby STACK DILUTION FAN 3B(3A) using control switch, 3-HS-66-31A(29A), Panel 3-9-8.

Standard:

Starts the standby Stack Dilution Fan.

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 13: Critical _ Not Critical X

[9] **REQUEST** Unit 1 and Unit 2 operators to START standby Stack Dilution Air Fans.

[10] **REQUEST** Chemistry perform 0-SI-4.8.B.2-8, Airborne Effluent Analysis - Stack Noble Gas, to determine activity.

[11] **REQUEST** Chemistry sample reactor water for radioactivity.

Standard:

Requests Unit 1 and 2 start fans, request chemistry support

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

CUE: Acknowledge requests

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: h (RO only)

TASK NUMBER: U-92A-NO-03

TASK TITLE: Returning an IRM to Service from the Bypassed Condition

K/A NUMBER: 215003 A2.02 K/A RATING: RO 3.5 SRO 3.7

PRA:

TASK STANDARD: Return IRM F to Service

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-OI-92A

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. Plant startup is in progress with IRM F bypassed and withdrawn. IRM F is ready to be returned to service.

INITIATING CUES: The Unit Supervisor directs you to return IRM F to service per 2-OI-92A, Intermediate Range Monitors, section 6.2.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. Plant startup is in progress with IRM F bypassed and withdrawn. IRM F is ready to be returned to service.

INITIATING CUES: The Unit Supervisor directs you to return IRM F to service per 2-OI-92A, Intermediate Range Monitors, section 6.2.

START TIME_____

****

Performance Step 1: Critical _ Not Critical X

6.2 Returning an IRM to Service from the Bypassed Condition

NOTE
All operations are performed on Panel 2-9-5 unless specifically stated otherwise.

[1] **REVIEW** all precautions and limitations in Section 3.0.

CAUTION
A bypassed IRM that is not fully inserted will receive a rod block signal when it is un-bypassed, unless the reactor is in the RUN mode (Mode 1).

Standard:

Reviews precautions and Limitations

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

[2] **IF** necessary and required, **THEN INSERT** the bypassed IRM detector.

Standard:

Inserts IRM F by depressing IRM F Select pushbutton and then depressing the Drive In pushbutton until IRM F indicates IN

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical X Not Critical

[3] **IF** required to avoid a scram signal, **THEN PLACE** the Range Switch for the IRM to be un-bypassed to a position where its indication is between 25 and 75 on the 0-125 scale.

Standard:

Ranges IRM F to the correct position so a half scram is not received

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[4] **PLACE** the applicable IRM Bypass selector switch to neutral (off):

- IRM BYPASS, 2-HS-92-7A/S4B

Standard:

Places IRM Bypass switch to neutral for IRM F

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical _ Not Critical X

[5] **CHECK** for channel previously bypassed that Bypassed light is extinguished.

Standard:

Verifies bypass light out

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical _ Not Critical X

[6] For the IRM channel returned to service, **PERFORM** one of the following:

- **CHECK** the IRM Select pushbutton extinguished, OR
- **DEPRESS** the IRM Select pushbutton to extinguish the light.

Standard:

Verifies light off or turns light off by depressing IRM select pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: h (RO only)

TASK NUMBER: U-92A-NO-03

TASK TITLE: Returning an IRM to Service from the Bypassed Condition

K/A NUMBER: 215003 A2.02 K/A RATING: RO 3.5 SRO 3.7

PRA:

TASK STANDARD: Return IRM F to Service

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-OI-92A

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. Plant startup is in progress with IRM F bypassed and withdrawn. IRM F is ready to be returned to service.

INITIATING CUES: The Unit Supervisor directs you to return IRM F to service per 3-OI-92A, Intermediate Range Monitors, section 6.2.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. Plant startup is in progress with IRM F bypassed and withdrawn. IRM F is ready to be returned to service.

INITIATING CUES: The Unit Supervisor directs you to return IRM F to service per 3-OI-92A, Intermediate Range Monitors, section 6.2.

START TIME_____

****

Performance Step 1: Critical _ Not Critical X

6.2 Returning an IRM to Service from the Bypassed Condition

NOTE
All operations are performed on Panel 3-9-5 unless specifically stated otherwise.

[1] **REVIEW** all precautions and limitations in Section 3.0.

CAUTION
A bypassed IRM that is not fully inserted will receive a rod block signal when it is un-bypassed, unless the reactor is in the RUN mode (Mode 1).

Standard:

Reviews precautions and Limitations

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

[2] **IF** necessary and required, **THEN INSERT** the bypassed IRM detector.

Standard:

Inserts IRM F by depressing IRM F Select pushbutton and then depressing the Drive In pushbutton until IRM F indicates IN

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical X Not Critical

[3] **IF** required to avoid a scram signal, **THEN PLACE** the Range Switch for the IRM to be un-bypassed to a position where its indication is between 25 and 75 on the 0-125 scale.

Standard:

Ranges IRM F to the correct position so a half scram is not received

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[4] **PLACE** the applicable IRM Bypass selector switch to neutral (off):

- IRM BYPASS, 3-HS-92-7A/S4B

Standard:

Places IRM Bypass switch to neutral for IRM F

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical _ Not Critical X

[5] **CHECK** Bypassed light is extinguished.

Standard:

Verifies bypass light out

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical _ Not Critical X

[6] For the IRM channel returned to service, **PERFORM** one of the following:

- **CHECK** the IRM Select pushbutton extinguished, OR
- **DEPRESS** the IRM Select pushbutton to extinguish the light.

Standard:

Verifies light off or turns light off by depressing IRM select pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

END OF TASK

STOP TIME ___

FINAL

OPERATOR: _____

RO ___ SRO ___ DATE: _____

JPM NUMBER: i

TASK NUMBER: U-000-EM-20

TASK TITLE: 1-EOI Appendix-1B Vent and Pressurize the Scram Air Header

K/A NUMBER: 295015AA1.01 K/A RATING: RO:3.8 SRO: 3.9

TASK STANDARD: Simulate venting and then pressurizing the scram air header

PERFORMANCE LOCATION: Plant

REFERENCES/PROCEDURES NEEDED: 1-EOI Appendix-1B

VALIDATION TIME: 7 Minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO

RESULTS: SATISFACTORY _____ UNSATISFACTORY _____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an operator. The Unit 1 reactor was scrammed and scram valves failed to open. EOI-1 has been entered and followed to RC/Q-2.

INITIATING CUE: The Unit Supervisor has directed you to perform 1-EOI Appendix-1B, VENTING AND REPRESSURIZING THE SCRAM PILOT AIR HEADER.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. ALL STEPS WILL BE SIMULATED. Do NOT operate any plant equipment. SELF CHECKING may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. Observe ALL plant radiological and safety precautions. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an operator. The Unit 1 reactor was scrammed and scram valves failed to open. EOI-1 has been entered and followed to RC/Q-2.

INITIATING CUE: The Unit Supervisor has directed you to perform 1-EOI Appendix-1B, VENTING AND REPRESSURIZING THE SCRAM PILOT AIR HEADER.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

START TIME _____

****

Performance Step 1: Critical X Not Critical

2. **CLOSE** the following valves (El. 565, R5, N-Line):

- 1-SHV-085-0260, CONT AIR HDR SPLY SHUTOFF VLV,
- 1-SHV-085-0261, CONT AIR HDR SPLY SHUTOFF VLV.

Standard:

Simulated Closing 1-SHV-085-0260 and 261.

SAT___ UNSAT___ N/A___ COMMENTS:_____

_____

CUE: [When simulated] The handwheel is turning, The valve is Closed.

****

Performance Step 2: Critical X Not Critical

3. **INSTALL** quick disconnects on drain nipples downstream the following drain valves (Panel 1-LPNL-925-0018B, east end):

- 1-DRIV-085-0038A, INSTR DRAIN VLV FOR PS-85-38
- 1-DRIV-085-0038B, INSTR DRAIN VLV FOR PI-85-38.

Standard:

Simulated Installing quick disconnects on each drain nipple

SAT___ UNSAT___ N/A___ COMMENTS:_____

_____

CUE: [When simulated] The quick disconnect is installed.

****

Performance Step 3: Critical X Not Critical

4. **OPEN** the following instrument drain valves (Panel 1-LPNL-925-0018B, east end):

   - 1-DRIV-085-0038A, INSTR DRAIN VLV FOR PS-85-38
   - 1-DRIV-085-0038B, INSTR DRAIN VLV FOR PI-85-38.

Standard:

Simulate Opening 1-DRIV-085-0038A and 0038B

SAT__ UNSAT__ N/A__ COMMENTS:_____

_____

CUE: [When simulated] The handwheel is turning and comes to a hard stop.

****

Performance Step 4: Critical _ Not Critical X

4. WHEN 1-PI-085-0038, CRD SCRAM VALVE PILOT AIR HEADER PRESS, indicates 0 psig, THEN **NOTIFY** Unit 1 Operator.

Standard:

Notifies Unit 1 Operator 1-PI-085-0038 indicates 0 psig.

SAT__ UNSAT__ N/A__ COMMENTS:_____

_____

CUE: 1-PI-85-38 indicates 0 psig.

CUE: [As Unit 1 UO, repeat] The scram pilot air header indicates 0 psig.

CUE: [As Unit 1 UO, report] The control rods have stopped moving and the Unit Supervisor directs re-pressurizing the scram pilot air header.

****

Performance Step 5: Critical X Not Critical

5. WHEN Unit Supervisor directs re-pressurizing Scram Pilot Air Header, THEN **REPRESSURIZE** the Scram Pilot Air Header as follows:

   a. **CLOSE** the following instrument drain valves:

   - 1-DRIV-085-0038A, INSTR DRAIN VLV FOR PS-85-38
   - 1-DRIV-085-0038B, INSTR DRAIN VLV FOR PI-85-38.

Standard:

Simulate Closing 1-DRIV-085-0038A and 0038B.

SAT__ UNSAT__ N/A__ COMMENTS:_____

_____

CUE: [When simulated] The handwheel is turning, The valve is Closed.

****

Performance Step 6: Critical X Not Critical

b. **SLOWLY OPEN** the following valves (El. 565, R5, N-Line):

- 1-SHV-085-0260, CONT AIR HDR SPLY SHUTOFF VLV,
- 1-SHV-085-0261, CONT AIR HDR SPLY SHUTOFF VLV.

Standard:

Simulate Opening 1-SHV-085-0260 and 0261.

SAT__ UNSAT__ N/A__ COMMENTS:_____

_____

CUE: [When simulated] The handwheel is turning, The valve is Open. 1-PI-85-38 indicates 73 psig or as read.

****

Performance Step 7: Critical_ Not Critical X

c. **REMOVE** quick disconnects on drain nipples downstream the following drain valves (Panel 1-LPNL-925-0018B, east end):

- 1-DRIV-085-0038A, INSTR DRAIN VLV FOR PS-85-38
- 1-DRIV-085-0038B, INSTR DRAIN VLV FOR PI-85-38.

Standard:

Simulate Removing quick disconnects on each drain nipple.

SAT__ UNSAT__ N/A__ COMMENTS:_____

_____

CUE: [When properly simulated for Each valve] The quick disconnect is removed.

****

Performance Step 8: Critical _ Not Critical X

6. WHEN Scram Pilot Air Header is re-pressurized, THEN **NOTIFY** Unit 1 Operator.

Standard:

Notifies Unit 1 Operator by phone or radio that the scram pilot air header is re-pressurized.

SAT__ UNSAT__ N/A__ COMMENTS:_____

_____

CUE: [As Unit 1 UO, repeat] The scram pilot air header is re-pressurized and 1-EOI Appendix-1B is complete.

END OF TASK

STOP TIME: _____

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: j

TASK NUMBER: U-000-AB-05

TASK TITLE: Start RCIC from outside Control Room

K/A NUMBER: 295016 AA1.02 K/A RATING: RO 4.2* SRO 4.3*

PAR:

TASK STANDARD: Simulate performing operations necessary to align RCIC from outside the Control Room as directed by 2-AOI-100-2.

LOCATION OF PERFORMANCE: Plant

REFERENCES/PROCEDURES NEEDED: 2-AOI-100-2

VALIDATION TIME: 12 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: Unit 2 was operating at 100% power. Unit 2 Control Room was then abandoned due to toxic gas in the Control Room.

- Pressure control has been established at the backup control panel 2-25-32.
- The RCIC system is being aligned for injection to the RPV.
- You are an operator assigned to the reactor building and you are in radio contact with the operators at the backup control panel.

INITIATING CUES: The Unit Operator directs you to perform Attachment 3, Part A, of 2-AOI-100-2.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. ALL STEPS WILL BE SIMULATED. Do NOT operate any plant equipment. Touch STAAR may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: Unit 2 was operating at 100% power. Unit 2 Control Room was then abandoned due to toxic gas in the Control Room.

- Pressure control has been established at the backup control panel 2-25-32.
- The RCIC system is being aligned for injection to the RPV.
- You are an operator assigned to the reactor building and you are in radio contact with the operators at the backup control panel.

INITIATING CUES: The Unit Operator directs you to perform Attachment 3, Part A, of 2-AOI-100-2.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

START TIME_____

NOTE
PAX phone Ext. 2233 is located at Column R-12, P-line near stairs to SLC.

1.0 PART A

Reactor Bldg. - RCIC System Aux Panel 2-LPNL-025-0031 - El 621'

****

Performance Step 1: Critical X Not Critical

2-XS-071-0036B	RCIC PUMP DISCH FLOW EMER TRANS SWITCH	EMERG_____
2-XS-071-0047	RCIC TURB GOV & CPLG END BRG HIGH TEMP EMER TRANS SWITCH	EMERG_____
3-XS-071-0024	RCIC OIL CLR OUTLET OIL TEMP EMER TRANS SWITCH	EMERG_____

CONTINUE Part A of this Attachment.

CUE: [As each switch is simulated] The switch is in Emergency.

Standard:

At Panel 3-LPNL-025-0031, Simulates placing 2-XS-071-0036B, 2-XS-071-0047 and 2-XS-071-0024 in EMERG.

SAT__ UNSAT___ N/A ___COMMENTS:_____

CAUTION
Failure to place control switch for each component in desired position prior to transferring to emergency may result in inadvertent actuation of the component.

NOTE
PAX phone Ext. 2225 is located at Column R-9, R-line between West-side HCUs.

****

Performance Step 2: Critical __ Not Critical X

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

1E	2-BKR-071-0029	RCIC TURB BAROMETRIC CNDR CNDS PUMP BREAKER	
	2-XS-071-0029	RCIC BAROMETRIC CNDR CNDS PUMP EMER TRANS SWITCH	EMERG_____
	2-HS-071-0029C	RCIC VAC TANK CNDS PUMP EMER HAND SWITCH	START_____

CUE: [As each switch is simulated]
2-XS-071-0029 is in Emergency
2-HS-071-0029C is in Start, Red light ON and Green light OFF

Standard:

At 250v DC RMOV bd 2C, compartment 1E, Simulates placing 2-XS-071-0029 in the EMERG position and 2-HS-071-0029C in the START position.

SAT__ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 3: Critical X Not Critical

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

3B	2-BKR-071-0037	RCIC PUMP DISCH VALVE BREAKER (GE-13-20)	
	2-XS-071-0037	RCIC PUMP DISCH VALVE EMER TRANS SWITCH	EMERG_____
	2-HS-071-0037C	RCIC PUMP DISCH VALVE EMER HAND SWITCH	OPEN_____

CUE: [As each switch is simulated]
2-XS-071-0037 is in Emergency
2-HS-071-0037C is in Open, Green light OFF and Red light ON OR AS IS

Standard:

At 250v DC RMOV bd 2C, compartment 3B, Simulates placing 2-XS-071-0037 in the EMERG position and 2-HS-071-0037C in the OPEN position.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

3D	2-BKR-071-0039	RCIC PUMP INJECTION VALVE BREAKER (GE-13-21)	
	2-XS-071-0039	RCIC PUMP INJECTION VALVE EMER TRANS SWITCH	EMERG_____
	2-HS-071-0039C	RCIC PUMP INJECTION VALVE EMER HAND SWITCH	OPEN_____

CUE: [As each switch is simulated]
2-XS-071-0039 is in Emergency
2-HS-071-0039C is in Open, Green light OFF and Red light ON

Standard:

At 250v DC RMOV bd 2C, compartment 3D, Simulates placing 2-XS-071-0039 in the EMERG position and 2-HS-071-0039C in the OPEN position.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: *Critical X Not Critical

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

4B	2-BKR-071-0008	RCIC TURBINE STM SUPPLY VALVE BREAKER (GE-13-131)	
	*2-XS-071-0008	RCIC TURBINE STM SUPPLY VALVE EMER TRANS SWITCH	EMERG_____
	2-HS-071-0008C	RCIC TURBINE STM SUPPLY VALVE EMER HAND SWITCH	NOR_____

CUE: [As each switch is simulated]
2-XS-071-0008 is in Emergency
2-HS-071-0008C is in Normal, Green light ON and Red light OFF

Standard:

At 250v DC RMOV bd 2C, compartment 4B, Simulates placing 2-XS-071-0008 in the EMERG position and 2-HS-071-0008C in the NOR position.

SAT___ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 6: Critical __ Not Critical X

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

6D	2-BKR-071-0019	RCIC CST 2 SUCT VALVE BREAKER (GE-13-18)	
	2-XS-071-0019	RCIC CST 2 SUCT VALVE EMER TRANS SWITCH	EMERG_____
	2-HS-071-0019C	RCIC CST 2 SUCT VALVE EMER HAND SWITCH	OPEN_____

CUE: [As each switch is simulated]
2-XS-071-0019 is in Emergency
2-HS-071-0019C is in Open, Red light ON and Green light OFF OR AS IS

Standard:

At 250v DC RMOV bd 2C, compartment 6D, Simulates placing 2-XS-071-0019 in the EMERG position and 2-HS-071-0019C in the OPEN position.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 7: Critical __ Not Critical X

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

7B	2-BKR-071-0038	RCIC PUMP TEST VALVE BREAKER (GE-13-30)	
	2-XS-071-0038	RCIC PUMP TEST VALVE EMER TRANS SWITCH	EMERG_____
	2-HS-071-0038C	RCIC PUMP TEST VALVE EMER HAND SWITCH	CLOSE_____

CUE: [As each switch is simulated]
2-XS-071-0038 is in Emergency
2-HS-071-0038C is in Close, Green light ON and Red light OFF or AS IS

Standard:

At 250v DC RMOV bd 2C, compartment 7B, Simulates placing 2-XS-071-0038 in the EMERGENCY position and 2-HS-071-0038C in the CLOSE position.

SAT__ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 8: Critical __ Not Critical X

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

7D	2-BKR-071-0018	RCIC SUPPR POOL OUTBD SUCT VALVE BREAKER (GE-13-39)	
	2-XS-071-0018	RCIC SUPPR POOL OUTBD SUCT EMER TRANS SWITCH	EMERG_____
	2-HS-071-0018C	RCIC SUPPR POOL OUTBD SUCT VALVE EMER HAND SWITCH	CLOSE_____

CUE: [As each switch is simulated]
2-XS-071-0018 is in Emergency
2-HS-071-0018C is in Close, Green light ON and Red light OFF OR AS IS

Standard:

At 250v DC RMOV bd 2C, compartment 7D, Simulates placing 2-XS-071-0018 in the EMERGENCY position and 2-HS-071-0018C in the CLOSE position.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 9: Critical __ Not Critical X

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

8B	2-BKR-071-0017	RCIC SUPPR POOL INBD SUCT VALVE BREAKER (GE-13-41)	
	2-XS-071-0017	RCIC SUPPR POOL INBD SUCT EMER TRANS SWITCH	EMERG_____
	2-HS-071-0017C	RCIC SUPPR POOL INBD SUCT VALVE EMER HAND SWITCH	CLOSE_____

CUE: [As each switch is simulated]
2-XS-071-0017 is in Emergency
2-HS-071-0017C is in Close, Green light ON and Red light OFF or AS IS

Standard:

At 250v DC RMOV bd 2C, compartment 8B, Simulates placing 2-XS-071-0017 in the EMERGENCY position and 2-HS-071-0017C in the CLOSE position.

SAT__ UNSAT__ N/A __COMMENTS:_____

****

Performance Step 10: Critical X Not Critical ___

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

8D	2-BKR-071-0025	RCIC LUBE OIL COOLING WATER VALVE BREAKER (GE-13-132)	
	2-XS-071-0025	RCIC LUBE OIL CLR COOLING WATER VALVE EMER TRANS SWITCH	EMERG_____
	2-HS-071-0025C	RCIC LUBE OIL CLR COOLING WATER VALVE EMER HAND SWITCH	OPEN_____

CUE: [As each switch is simulated]
2-XS-071-0025 is in Emergency
2-HS-071-0025C is in Open, Green light OFF and Red light ON

Standard:

At 250v DC RMOV bd 2C, compartment 8D, Simulates placing 2-XS-071-0025 in the EMERG position and 2-HS-071-0025C in the OPEN position.

SAT__ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 11: Critical___ Not Critical X

Reactor Bldg. - 250V DC Reactor MOV Board 2C - El 565'

10E	2-BKR-071-0031	RCIC TURB BAROMETRIC CNDR VAC PUMP BREAKER	
	2-XS-071-0031	RCIC BAROMETRIC CNDR VAC PUMP EMER TRANS SWITCH	EMERG_____
	2-HS-071-0031C	RCIC BAROMETRIC CNDR VAC PUMP EMER HAND SWITCH	START_____

CUE: [As each switch is simulated]
2-XS-071-0031 is in Emergency
2-HS-071-0031C is in Start, Red light ON and Green light OFF

Standard:

At 250v DC RMOV bd 2C, compartment 10E, Simulates placing 2-XS-071-0031 in the EMERG position and 2-HS-071-0031C in the START position.

SAT___ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 12: Critical __ Not Critical X

NOTIFY UO at Panel 2-25-32 upon completion of Part A.

CUE: [When Simulated notifying UO at 25-32, repeat] Attachment 3 Part A is complete.

Standard:

Simulates notifying UO of completion of Attachment 3, Part A, using radio or PAX phone.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13: Critical __ Not Critical X

STOP here until directed to perform Part B.

Standard:

N/A

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: That completes this task.

END OF TASK

STOP TIME_____

FINAL

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: k - **ALTERNATE PATH**

TASK NUMBER: U-047-AL-11

TASK TITLE: 0-SSI-2-1 Respond to a Reactor Building Fire at elevation 519 through 565 West of column line R11

K/A NUMBER: 600000 AA2.16 K/A RATING: RO 3.0 SRO 3.5

PRA:

TASK STANDARD: Simulate performing designated steps of an SSI as directed by the Unit 2 Unit Supervisor and 0-SSI-2-1.

LOCATION OF PERFORMANCE: Plant

REFERENCES/PROCEDURES NEEDED: 0-SSI-2-1

VALIDATION TIME: 20 minutes

MAX. TIME ALLOWED: 20 minutes for sections 1.0 and 2.0

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator. Unit 2 was at 60% power and Unit 1 and 3 at 100% power. Due to a fire in the Unit 2 reactor building the SSIs have been entered. You have a hand-held radio.

INITIATING CUES: The Unit Supervisor directs you to perform the actions of 0-SSI-2-1, Attachment 2, Operator 2 Manual Actions.

Time Critical

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. ALL STEPS WILL BE SIMULATED. Do NOT operate any plant equipment. SELF CHECKING may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. Observe ALL plant radiological and safety precautions. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator. Unit 2 was at 60% power and Unit 1 and 3 at 100% power. Due to a fire in the Unit 2 reactor building the SSIs have been entered. You have a hand-held radio.

INITIATING CUES: The Unit Supervisor directs you to perform the actions of 0-SSI-2-1, Attachment 2, Operator 2 Manual Actions.

Time Critical

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT

START TIME _____

****

Performance Step 1: *Critical X Not Critical

ATTACHMENT 2
OPERATOR 2 MANUAL ACTIONS

1.0 4KV SHUTDOWN BOARD D ALIGNMENT (20 Min)

[1] **PROCEED** to Electric Board Room 2B and **PERFORM** the following to align 4KV Shutdown Board D:

[1.1] **PROCEED** to Compartment 5, 0-BKR-211-000D/005 BKR 1618 ALT SUPPLY TO 4KV S/D BD D FROM S/D BUS 1 AND **PERFORM** the following:

*[1.1.1] **PLACE** the BREAKER CONTROL TRANSFER SWITCH 43, 0-43-211 000D/05, in EMERG.

[1.1.2] **PLACE** the BREAKER CONTROL SWITCH, 0-HS-211-000D/05B in TRIP.

Standard:

At Compartment 5, simulates placing transfer switch 43 to EMERG position and simulates placing the breaker control switch in TRIP.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The 43 Switch is in Emergency. If breaker was originally closed, the breaker is open the indicating lights are Red light OFF and Green light ON. [Otherwise], the breaker is tripped or as indicated.

****

Performance Step 2: Critical X Not Critical

[1.2] **PROCEED** to Compartment 13, 0-BKR-211-000D/013 NORM SUPPLY TO TRANSFORMER TDB TO 480V D/G AUX BD B, AND **PERFORM** the following:

[1.2.1] **PLACE** BREAKER CONTROL SWITCH 0-HS-211-000D/013 in TRIP.

Standard:

At Compartment 13, simulates placing 0-HS-211-000D/013 in TRIP

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: If breaker was originally closed, the breaker is open the indicating lights are Red light OFF and Green light ON. [Otherwise], the breaker is tripped or as indicated.

****

Performance Step 3: Critical X Not Critical

[1.3] **PROCEED** to Compartment 16, 1-BKR-074-0039 RESIDUAL HEAT REMOVAL PUMP 1D AND **PERFORM** the following:

[1.3.1] **PLACE** RHR PUMP 1D TRANSFER 1-43-074-0039 in EMERG.

[1.3.2] **PLACE** RHR PUMP 1D, 2-HS-074-0039C in TRIP.

Standard:

At Compartment 16, simulates placing switch, 1-43-074 0039 in EMERG and simulates placing breaker control switch, 0-HS-074-0039C in TRIP.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The Transfer Switch is in Emergency. If breaker was originally closed, the breaker is open the indicating lights are Red light OFF and Green light ON. [Otherwise], the breaker is tripped or as indicated.

NOTE

RESIDUAL HEAT REMOVAL PUMP 2D will be started later in this attachment for LPCI injection to reactor at 120 minutes. For "confirmation" purposes the switch in Step 1.0[1.4.2] is realigned by Section 2.0 of this Attachment.

****

Performance Step 4: Critical X Not Critical

[1.4] **PROCEED** to Compartment 17, 2-BKR-074-0039 RESIDUAL HEAT REMOVAL PUMP 2D AND **PERFORM** the following:

[1.4.1] **PLACE** RHR PUMP D BREAKER CONTROL TRANSFER SWITCH 43, 2-43-074-0039 in EMERG.

[1.4.2] **PLACE** RHR PUMP 2D, 1-HS-74-39C in TRIP.

Standard:

At Compartment 17, simulates placing switch 2-43-074-0039 in EMERG and simulates placing 2-HS-74-39C in TRIP

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The Transfer Switch is in Emergency. If breaker was originally closed, the breaker is open the indicating lights are Red light OFF and Green light ON. [Otherwise], the breaker is tripped or as indicated.

****

Performance Step 5: Critical X Not Critical

[1.5] **PROCEED** to Compartment 20, 0-BKR-211-000D/020 BKR 1816 TO 4KV S/D BD D FROM DG 1D AND **PERFORM** the following:

[1.5.1] **PLACE** BKR 1816 EMER APP R ISOL SEL SWITCH (43AR), 0-43BU-211-000D/20, in EMER.

[1.5.2] **PLACE** BREAKER CONTROL TRANSFER SWITCH 43, 0-43-211-000D/20 in EMERG.

[1.5.3] **PLACE** BREAKER CONTROL SWITCH, 0-HS-211-000D/20B in TRIP.

Standard:

At Compartment 20, simulates placing switch 43AR in EMER, simulates placing switch 43 in EMERG, and simulates placing breaker control switch in TRIP.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The 43AR Switch is in Emergency. The 43 Switch is in Emergency.
If breaker was originally closed, the breaker is open the indicating lights are Red light OFF and Green light ON.
[Otherwise], the breaker is tripped or as indicated.

****

Performance Step 6: Critical X Not Critical

[1.6] **PROCEED** to Compartment 22, 0-BKR-211-000D/022 BKR 1724 NORM SUPPLY TO 4KV S/D BD D FROM S/D BUS 2 AND **PERFORM** the following:

[1.6.1] **PLACE** BKR 1724 EMER APP R ISOL SEL SWITCH (43AR) 0-43BU-211-000D/22, in EMER.

[1.6.2] **PLACE** BREAKER CONTROL TRANSFER SWITCH 43, 0-43-211-000D2/22, in EMERG.

[1.6.3] **PLACE** BREAKER CONTROL SWITCH, 0-HS-211-000D/22B, in TRIP.

Standard:

At Compartment 22, simulates placing Switch 43AR in EMER, simulates placing Switch 43 in EMERG, and simulates placing breaker control switch in TRIP.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The 43AR Switch is in Emergency. The 43 Switch is in Emergency. If breaker was originally closed, the breaker is open the indicating lights are Red light OFF, Green light ON. [Otherwise], the breaker is tripped or as indicated.

NOTE

Synchronizing switch handle is located in box by door.

****

Performance Step 7: Critical X Not Critical

[1.7] **PROCEED** to Compartment 6, 0-BKR -211-000D/006 BKR 1826 TO 4KV S/D BD D FROM 4KV S/D BOARD 3ED AND **PERFORM** the following:

[1.7.1] **PLACE** BKR 1826 EMER APP R ISOL SEL SWITCH (43AR), 0-43BU-211-000D/006, in EMER.

[1.7.2] **PLACE** BREAKER CONTROL TRANSFER SWITCH 43, 0-43-211-000D/06, in EMERG.

Standard:

At Compartment 6, simulates placing Switch 43AR in EMER and Switch 43 in EMERG.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The 43AR Switch is in Emergency. The 43 Switch is in Emergency.

****

Performance Step 8: *Critical X Not Critical

*[1.7.3] **PLACE** SYNCHRONIZING SWITCH 25-826, 0-25-211-000D/06B, in ON.

*[1.7.4] **WHEN** Synchronizing Panel INCOMING VOLTMETER indicates greater than 3950 volts, **THEN**

PLACE BREAKER CONTROL SWITCH, 0-HS-211-000D/06B, in CLOSE.

[1.7.5] **PLACE** SYNCHRONIZING SWITCH 25-826, 0-25-211-000D/06B, in OFF.

Standard:

Simulates placing Switch 25-826 in ON, verifies incoming volts greater than 3950 volts. Simulates placing the Breaker Control Switch in CLOSE. Simulates placing Switch 25-826 in OFF.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Switch 25-826 in ON

INCOMING VOLTMETER Voltage is 4210 volts (4150-4450 volts is normal band)

The indicating lamps changed Green light OFF and Red light ON, breaker closed.

Switch 25-826 in OFF

****

Performance Step 9: Critical__ Not Critical X

[2] **NOTIFY** Unit 2 Unit Supervisor upon completion of this section.

[3] **REMAIN** AT 4KV Shutdown Board D to perform Section 2.0 of this instruction.

Standard:

Simulates notifying Unit 2 Unit Supervisor of completion of 0-SSI-2-1, Attachment 2, Section 1.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The Unit 2 Unit Supervisor directs you to complete attachment 2, section 2 RHR Pump 2D start.

****

Performance Step 10: Critical_ Not Critical X

2.0 RHR PUMP 2D START (20 Min)

[1] Notification has been received from the Unit 2 Unit Supervisor to perform this section.

NOTE

If RHR pump fails to start, pushbutton on breaker must be used.

[2] **PROCEED TO** 4KV Shutdown Board D Compt 17, 2-BKR-074-0039 RESIDUAL HEAT REMOVAL PUMP 2D, AND **PERFORM** the following:

[2.1] **VERIFY** RHR PUMP D BREAKER CONTROL TRANSFER SWITCH 43, 2-43-074-0039, in EMERG.

Standard:

Verifies that RHR Pump 2D Transfer Switch is in EMERG.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Switch is still in Emergency from previous step 1.4. 2-43-074-0039 is in EMERGENCY.

EXAMINER: ALTERNATE PATH STARTS WITH NEXT STEP

****

Performance Step 11: Critical X Not Critical

[2.2] **PLACE** RHR PUMP 2D, 2-HS-74-39C, in CLOSE.

Standard:

Simulates placing 2-HS-74-39C in CLOSE.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: There was NO noise of breaker closing and the green light is ON NO Amps are indicated.

****

Performance Step 12: Critical X Not Critical

DEPRESS PUSH TO CLOSE pushbutton.

Standard:

Simulates depressing PUSH TO CLOSE pushbutton.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: The "THUD" of the breaker closing was heard and the red light is ON and when amps are checked amps pegged high and now are indicating 80 amps.

THIS COMPLETES THE TIME CRITICAL PORTION OF THIS JPM. TIME_____

****

Performance Step 13: Critical_ Not Critical X

[2.3] **VERIFY** RHR Pump 2D has started by Observing Breaker ammeter indication.

[3] **NOTIFY** Unit 2 Unit Supervisor of the completion of this section.

[4] **PROCEED TO** Intake Pumping Station in preparation of performing Section 3.0.

Standard:

Verifies ammeter reading and simulates informing Unit supervisor that RHR Pump 2D is running.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: When operator reads the ammeter the reading is 80 amps.
Acknowledge operation of RHR Pump 2D when US contacted.
Another operator is completing section 3.0. This completes this JPM.

END OF TASK

STOP TIME ___