Dresden Generating Station

SIMULATOR EXERCISE GUIDE

ILT 01-1 NRC RE-EXAM

SCENARIO

ILT-R-3

Rev. 01

11/02

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Facility: Dresden Scenario No: ILT-R-3 Op-Test No: ILT 01-1

Examiners: _____ Operators: _____

_____ _____

_____ _____

Initial Conditions: 15% reactor power, IRM channel 15 OOS, Unit 3 is in Mode 1

Turnover: Unit startup in progress; transfer auxiliary power to transformer 21, then continue power ascension

Event No.	Malf. No.	Event Type*		Event Description
1	N/A	N	ANSO SRO	Synchronize Main Generator to the grid
2	N/A	R	NSO SRO	Raise reactor power by withdrawing control rods
3	RLMLFBF	I	NSO SRO	A blown fuse causes a lockup of the LFRV
4	ICSPDFT	I	ANSO SRO	A setpoint drift causes a spurious Isolation Condenser initiation
5	FWICP1	C	NSO SRO	High amps on the 2A Condensate Pump
6	Q21	C	ANSO SRO	Trip of the 2A Service Water Pump
7	HPRBBRKP RADFFD	M	ALL	Unisolable steam leak in the reactor building from the HPCI line with a fuel element failure
8	RDFHYDK		NSO SRO	Rods fail to insert due to a hydraulic lock

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Dresden Generating Station

NRC ILT RE-EXAM

Scenario ILT-R-3

Scenario Objective

Evaluate the operators in using the Failure to Scram contingency procedure.

Scenario Summary

Initial Conditions:

- 15% power, unit startup in progress
- IRM 15 OOS
- 2B EHC Pump OOS
- Unit 3 is in Mode 1

Events:

- Synchronize the Main Generator to the Grid.
- Raise reactor power by withdrawing control rods
- A blown fuse causes a lockup of the LFRV
- A setpoint drift causes a spurious Isolation Condenser initiation
- High amps on the 2A Condensate Pump
- Trip of the 2A Service Water Pump
- Unisolable steam leak in the reactor building from the HPCI line
- Rods fail to insert due to a hydraulic lock / SBLC failure

Scenario Sequence

- The Team synchronizes the generator to the Grid.
- The NSO, as directed by the SRO, then continues the power ascension for unit startup by control rod withdrawal.
- During the power ascension, a blown fuse causes a lockup of the LFRV.
- A setpoint drift causes a spurious Isolation Condenser initiation.
- 2D Condensate Pump is drawing excessive current and is reported by an NLO to be running abnormally hot.
- 2A Service Water Pump trips on overload.
- An unisolable steam leak develops in the Reactor Building from the HPCI line.
- An ATWS condition results from the failure of all rods to insert due to a hydraulic lock.
- SBGT fails to start as expected.
- The scenario is terminated when all rods are inserted and the plant stabilized.

Event One – Synchronizes the Main Generator to the Grid

The Team synchronizes the generator to the Grid.

Malfunctions required: 0

Success Path:

- The Generator is synchronized to the grid IAW DGP 01-01.

Event Two – Raise Reactor power by withdrawing control rods.

The Team increases reactor power by withdrawing control rods per DOP 0400-01, and DGP 03-04.

Malfunctions required: 0

Success Path:

- Control rods pulled per applicable procedures.

Event Three – A blown fuse causes a lockup of the LFRV

A blown fuse causes a lockup of the LFRV.

Malfunctions required: 1 (Blown fuse for LFRV)

Success Path:

- Blown fuse replaced and LFRV back in Auto

Event Four – A setpoint drift causes a spurious Isolation Condenser initiation

Shortly after assuming the shift, the Team should recognize and respond to the Isolation Condenser inadvertent initiation. The team will verify the signal is not valid and secure the Isolation Condenser.
.

Malfunctions required: 1 (Iso-Condenser Automatic Initiation)

Success Path:

- The team isolates the isolation condenser
- Refers to Technical Specifications.

Event Five – High amps on the 2D Condensate Pump

2D Condensate Pump is drawing high amps and is running abnormally hot.

Malfunctions required: 1 (High amps on 2D Condensate Pump.)

Success Path:

- Start a standby Condensate Pump and secure 2D Condensate Pump.

Event Six – Trip of the 2A Service Water Pump.

The Team should recognize and respond to Service Water Pump 2A tripping on overload. The ANSO should manually start the 2/3 Service Water Pump.

Malfunctions required: 1 (Service Water Pump trip)

Success Path:

- Start the 2/3 Service Water pump.

Event Seven – Unisolable steam leak in the Reactor Building from the HPCI line.

The Team should recognize and respond to the report of a steam leak in the Reactor Building.

Malfunctions required: 3 (Steam leak from the HPCI line)
(FEF)
(HPCI 4 valve failure to close)

Success Path:

- Attempt to manually scram the Reactor.

Event Eight – Rods fail to insert due to a hydraulic lock.

The Team should recognize and respond to the ATWS and the failure of SBLC to start.

Malfunctions required: 2 (Hydraulic lock on SDV)
(SBLC failure to inject)

Success Path:

- All rods inserted

Scenario Recapitulation

Total Malfunctions:	9	
Abnormal Events:	4	
Major Transients:	1	(ATWS)
EOPs Entered:	1	
EOP Contingencies:	1	(ATWS)

Op-Test No: ILT 01-1 Scenario No.: ILT-R-3 Event No.: 1 Page 1 of 1

Event Description: Transfer Aux Power from TR-22 to TR-21.

Time	Position	Applicant's Actions or Behavior
	SRO	Directs the ANSO to synchronize the Generator to the Grid IAW DGP 01-01.
	ANSO	Synchronizes the Generator to the Grid: ❑ Notifies Bulk Power Operations that Unit 2 is ready to parallel to grid. ❑ Check all three phase voltages are approx equal at 18 kv using U2 GENERATOR VOLTS SELECT. ❑ Synchronize Generator to the grid. ❑ Closes OCB 2-3 or 2-7. ❑ Verifies OCB indicates CLOSED. ❑ Place synchroscope switch in OFF. ❑ Raise GOVERNOR to CLOSE all Main Turbine bypass valves. ❑ Adjust LOAD SET to maximum. ❑ Close the Ring Bus. ❑ Place the Voltage Regulator in Auto ❑ Dispatch an Operator to verify MPT cooling fans selected have started and pump flow is normal. ❑ Verify MN BRG OIL PRESS on 902-7 is approximately 35 psig. ❑ Secure: • TGOP • MSP • Turb Brg Lift PPs ❑ When Load approximately 80 Mwe: • Close MSL drains. • Close Control valve above seat drains.
	NSO	Monitors panels and assists as directed.
		ROLE PLAY: NLO dispatched to MPT 2 cooling fans (wait 3 mins) Report: "All cooling fans operational and pump flows look good".
		Event 1 Completion Criteria: – U2 Generator has been synchronized to the grid. – AND, at the direction of the NRC Chief Examiner.

Op-Test No: ILT 01-1 Scenario No.: ILT-R-3 Event No.: 2 Page 1 of 1

Event Description: The NSO, as directed by the SRO, then continues the power ascension for unit startup by control rod withdrawal.

Time	Position	Applicant's Actions or Behavior
	NSO	Performs the following actions per DOP 0400-01, Reactor Manual Control System Operation, and DGP 03-04, Control Rod Movements, as directed Verifies the following prior to moving any control rod: Control rod selected on the select matrix is correct rod. Second Verification requirements satisfied. Rod Out Permit light is illuminated. Drive water pressure at nominal 260 psid. Withdraws rods as follows: Moves Rod Out Notch Override (RONOR) Switch to NOTCH OVERRIDE position (use of RONOR switch is optional) and the Rod Movement Control switch to ROD OUT. Verifies ON light illuminated and proper Control Rod Timer operation. Releases switches before target position is reached. • Verifies rod settles to target position and proper response of nuclear instrumentation.
	ANSO	Performs second verification checks. For first rod in a step: Verifies correct control rod pattern Verifies correct step and array. Verifies RWM rod blocks enabled For all rods moved: Verifies correct control rod selected. Verifies planned control rod motion is correct. Immediately notify the NSO of errors during rod motion. Verifies control rod at target position.
	SRO	Directs pulling control rods. Reviews REMA. Designates second verifier. Directs NSO to pulls rods.
		Event 2 Completion Criteria: – Sufficient power increase. – AND, at the direction of the NRC Chief Examiner.

Op-Test No: ILT 01-1 Scenario No.: ILT-R-3 Event No.: 3 Page 1 of 1

Event Description: A blown fuse causes a lockup of the LFRV.

Time	Position	Applicant's Actions or Behavior
		SIMULATOR OPERATOR: At the discretion of the NRC chief examiner, activate **trigger 1**, which causes Low Flow Reg Valve to lockup.
	NSO	Reports annunciator DAN 902-6 G-10, LOW FLOW REG VLV LOCKUP and 902-6 H-3, FW CONTROL SYSTEM PANEL TROUBLE, in alarm and refers to DAN: ❑ Determines cause of valve lockup at Operator Interface Station on 902-18 Panel. • Selects F-20 to view alarm summary. • OIS alarm 643 LFRV PLS POS FUSE BAD displayed • Requests IMD to replace fuse. • Selects (+) key to acknowledge alarms. • Maintain RPV level IAW DOA 600-1
	NSO	Monitors Panels and assists as needed.
	SRO	❑ Acknowledges report of annunciators. ❑ May direct entry into DOA 600-1
		SIMULATOR OPERATOR / ROLE PLAY: IMD to replace LFRV fuse, (wait 5 mins) Activate **trigger 2** to replace blown LFRV fuse. IMD report "LFRV fuse has been replaced".
	NSO	❑ Resets LFRV IAW DOP 600-06, FRV Operation step G-10. • When white RESET pushbutton on 902-5 is backlit, depress the RESET pushbutton. • Verify annunciator 902-6 G-10 has cleared. ❑ Returns LFRV to Auto per step G-9 of DOP 600-06. ❑ Place RX LOW FLOW CONTROL STATION in AUTO
		Event 3 completion criteria: LFRV is back in auto. AND, at the discretion of the NRC Chief Examiner

Op-Test No: ILT 01-1 Scenario No.: ILT-R-3 Event No.: 4 Page 1 of 1

Event Description: A setpoint drift causes a spurious Isolation Condenser initiation.

Time	Position	Applicant's Actions or Behavior
		Simulator Operator Actions: **Note:** There is a time delay of ~ 15 seconds after activating this trigger. At the direction of the Lead Evaluator activate **trigger 3,** which starts the Isolation Condenser inadvertent initiation.
	NSO / ANSO	❑ Recognizes and announces Isolation Condenser initiation. ❑ Verifies IC initiation is not valid. ❑ Announces and refers to DAN 902-4 A-15, ISOL CONDR CH A/B INITIATION. ❑ Places the 2-1301-03 valve in P-T-L per DAN 902-4 A-15. ❑ Contacts RP. ❑ Contacts Security to rope off area under IC vent.
		ROLE PLAY: QNE: Acknowledge request but do NOT report to the control room.
	SRO	❑ Contacts maintenance to investigate Isolation Condenser initiation.
		ROLE PLAY: Maintenance: Acknowledge request but do NOT report to the control room.
		Event 4 Completion Criteria: – 2-1301-3 valve has been placed in pull to lock. OR – At the discretion of the NRC Chief Examiner

Op-Test No: ILT 01-1 Scenario No.: ILT-R-3 Event No.: 5 Page 1 of 1

Event Description: High amps on the 2D Condensate Pump motor.

Time	Position	Applicant's Actions or Behavior
		SIMULATOR OPERATOR: At the discretion of the NRC chief examiner, activate **trigger 4**, which causes the 2D Condensate Pump motor amps to rise from 175 to 300 over 2 mins.
	ANSO	❑ Starts 2B or 2C Condensate Pump. ❑ Secures 2D Condensate Pump. ❑ Directs NLO to check 2B or 2C Condensate Pump for proper operation and investigate 2D Condensate Pump.
	NSO	Monitors panels and assists as directed.
		ROLE PLAY: NLO to check 2B and 2D Condensate Pump (wait 30 secs after trigger 4 inserted). Report "2B Condensate Pump is running normally and 2D Condensate Pump feels abnormally hot". **SIMULATOR OPERATOR:** After 2D Condensate Pump has been secured, verify **trigger 10** has returned 2D Condensate Pump amps to 0. If not, delete override FWICP4.
		Event 5 Completion Criteria: 2B Condensate Pump is running. And at the direction of the NRC Chief Examiner.

Op-Test No: ILT 01-1 Scenario No.: ILT-R-3 Event No.: 6 Page 1 of 1

Event Description: Trip of the 2A Service Water Pump on overload.

Time	Position	Applicant's Actions or Behavior
		Simulator Operator Actions: At the discretion of the NRC Chief Examiner, activate **trigger 5,** which trips the 2A Service Water Pump.
	ANSO	Acknowledges Annunciator and IAW DAN 923-1 C-3: ❑ At Panel 923-1, check which pump has tripped. ❑ Check 90-100 psig on SERV WTR PP DISCH PRESS. ❑ Starts 2/3 Service Water Pump. ❑ Refers to DOA 6500-10, 4Kv Circuit Breaker Trip and: • Directs an NLO to the Cribhouse to check 2/3 Service Water Pump and inspect 2A Service Water Pump. • Direct an NLO to check the breaker of 2A Service Water Pump. • Places control switch in Pull to Lock. Notifies Ops Shift Supervisor. • Requests EMD to troubleshoot.
	SRO	Notifies Shift Manager and EMD. Enters DOA 3900-01 Loss of Cooling by Service Water System.
		Role Play: NLO at 2/3 Service Water Pump (wait 5 mins): Report: " 2/3 Service Water Pump is operating normally and 2A Service Water Pump shows no sign of damage". NLO at 2A Service Water Pump at Bus 23 (wait 5 mins): Report: " 2A Service Water Pump Breaker has overcurrent targets up" . EMD Acknowledges need to go to Bus 23 and troubleshoot overcurrent flag at 2A Service Water Pump breaker.
		Event 6 Completion Criteria: – 2/3 Service Water pump is running. – EMD has been dispatched to Bus 23 for troubleshooting. – AND, at the direction of the NRC Chief Examiner.

Op-Test No: ILT 01-1 Scenario No.: ILT-R-3 Event No.: 7 & 8 Page 1 of 5

Event Description: An unisolable steam leak develops in the Reactor Building from the HPCI line.

Time	Position	Applicant's Actions or Behavior
		SIMULATOR OPERATOR: At the discretion of the NRC chief examiner, activate **trigger 6**, a 2.5% FEF and starts a HPCI line break at the HPCI 5 valve ramping to 100% in 2 mins.
	NSO	❑ Announces numerous alarms due to the HPCI steam line break and fuel element failure such as: - 902-3 A-1, Rx Bldg Hi Rad - 902-3 B-16, Rx Bldg Vent Ch A/B Rad Hi - 902-3 A-3, Rx Bldg Vent Ch B Rad Hi Hi - 902-3 C-12, HPCI Steam Flow Hi
	ANSO	❑ Checks backpanel ARMs and determines that the areas affected are the torus area (primary) and also the east and west corner rooms/CRD areas.
	NSO / ANSO	Performs DEOP 300-1, Secondary Containment Control actions as directed. ❑ Verifies Rx Bldg Vent. isolates and SBGT starts. ❑ Monitors affected areas temperatures and radiation levels ❑ Operates all available area coolers (LPCI/CS and HPCI room coolers)
	ANSO	❑ Makes PA and/or plant radio announcements to evacuate the reactor and (maybe) turbine buildings. ❑ May dispatch NLO and/or radiation protection technician to investigate the source of the leakage. ❑ Determines that the leak is from the HPCI steam line either by plant knowledge, reports from the field, or by receiving alarm 902-3 C-12, HPCI Stm Line Flow Hi and reports to US. ❑ Verifies HPCI steam line MOV 2301-5 is closed. ❑ Determines leak is unisolable due to the HPCI MOV 2301-4 valve being unable to close.

Op-Test No: ILT 01-1 Scenario No.: ILT-R-3 Event No.: 7 & 8 Page 2 of 5

Event Description: An unisolable steam leak develops in the Reactor Building from the HPCI line.

Time	Position	Applicant's Actions or Behavior
		ROLE PLAY: Individual to investigate leakage (wait 3 mins): Report "There is steam accumulating on the first floor of the reactor building on the east side, it appears to be coming from the torus access ladder, and that it is getting very hot and humid in the area".
	NSO	Performs the following actions per DGP 02-03, Reactor Scram: ❑ Presses scram pushbuttons ❑ Places mode switch in shutdown ❑ Checks rods inserted; discovers ATWS condition ❑ Initiates ARI ❑ Verifies recirc pump speed at minimum.
	SRO	Enters DEOP 0100, RPV Control. When reaches required level of DEOP 300-1 order Reactor scram, exits DEOP 100 and enters DEOP 400-5, Failure to Scram, and directs the following: ❑ √ **Placing ADS to inhibit** ❑ Placing both CS pumps in PTL <u>Power Leg</u> ❑ Running back recirc to minimum. ❑ Tripping the recirc pumps ❑ √ **Directing Alternate Rod Insertion** per DEOP 500-05: • manually driving rods. • repeated scram/resets. ❑ Initiating SBLC before SP/T of 110°F. <u>Level Leg</u> ❑ Verification water level instruments are accurate ❑ Verification any required automatic actions have occurred ❑ Directing jumpers installed for MSIV low level and Off Gas high Rad isolations ❑ √ **Terminating and Preventing injection except boron and CRD** until RPV/L is ≤ -35 inches. ❑ If SP/T is above 110°F, lets level drop until: • Power is below 6%, OR • Level drops to -143 in. (TAF), OR • All ADSVs stay closed and PC/P stays below 2 psig ❑ √ **Re-establishing injection to *MAINTAIN* RPV water level above -164 inches.** <u>Pressure Leg</u> ❑ Maintaining <1060 psig using Bypass Valves.

Op-Test No: ILT 01-1 Scenario No.: ILT-R-3 Event No.: 7 & 8 Page 3 of 5

Event Description: An unisolable steam leak develops in the Reactor Building from the HPCI line.

Time	Position	Applicant's Actions or Behavior
	NSO / ANSO	Performs DEOP 400-5, Failure to Scram, actions as directed: ❑ √ **Places ADS to inhibit** ❑ Places both CS pumps in PTL <u>Power Leg</u> ❑ Trips recirculation pumps ❑ √ **Performs Alternate Rod Insertion**. (see below for specific actions) ❑ Initiates boron injection. Reports SBLC has failed to inject. <u>Level Leg</u> ❑ √ **Terminates and Prevents injection except boron and CRD** until RPV/L is ≤ -35 inches. ❑ If SP/T is above 110°F, lets level drop until: • Power is below 6%, OR • Level drops to -143 in. (TAF), OR • All ADSVs stay closed and PC/P stays below 2 psig ❑ √ **Re-establishes injection to *MAINTAIN* RPV water level above -164 inches.** <u>Pressure Leg</u> ❑ Maintains <1060 psig using Bypass valves.
NSO		√ **Performs manual control rod insertion** per DEOP 500-05, Alternate Insertion of Control Rods, as directed: ❑ Bypasses the RWM ❑ Starts the second CRD pump ❑ Maximizes drive water pressure using one or more of the methods in DEOP 500-05. ❑ Inserts rods using RONOR in EMERG IN or the normal rod movement control switch
	NSO	√ **Performs repeated scram/resets** per DEOP 500-05, Alternate Insertion of Control Rods, as directed: ❑ Depresses close pushbuttons for SDV vent and drain valves ❑ If RPV/L <-59 inches, directs pulling ARI fuses. ❑ Attempts to reset scram ❑ Directs scram jumpers installed. ❑ Resets the scram ❑ Verifies all scram valves closed ❑ Opens the SDV vent and drains ❑ When 902-5 C-1 clears, scrams reactor ❑ Repeats as necessary

Op-Test No: ILT 01-1	Scenario No.: ILT-R-3	Event No.: 7 & 8	Page 4 of 5

Event Description: An unisolable steam leak develops in the Reactor Building from the HPCI line.

Time	Position	Applicant's Actions or Behavior
		SIMULATOR OPERATOR / ROLE PLAY: Operator to jumper the MSIV Group1-59 in. and offgas hi hi radiation isolations (wait 5 min): Activate **trigger 8** and report "the MSIV Group1-59 in. and offgas hi hi radiation isolations are jumpered".
		SIMULATOR OPERATOR / ROLE PLAY: Operator to pull ARI fuses (wait 5 min): Verify **trigger 10** activated and report "the ARI fuses are pulled". Operator to install scram jumpers (wait 5 min): Activate **trigger 7** and report "the scram jumpers are installed".
	SRO	❑ Based on failure of SBLC to inject, directs performance of DEOP 0500-01, Alternate Standby Liquid Control Injection.
		SIMULATOR OPERATOR / ROLE PLAY: Operator to install jumpers to defeat DW Cooler trips (wait 5 min): Activate **trigger 9** activated and report "the DW Cooler trip jumpers are installed".

Op-Test No: ILT 01-1	Scenario No.: ILT-R-3	Event No.: 7 & 8	Page 5 of 5

Event Description: An unisolable steam leak develops in the Reactor Building from the HPCI line.

Time	Position	Applicant's Actions or Behavior
		SIMULATOR OPERATOR: After the crew has reset the scram and at the discretion of the NRC chief examiner, remove the SDV hydraulic lock.
	SRO	Based on report that all rods are inserted, exits DEOP 400-05, Failure to Scram, and enters DEOP100, RPV Control and directs: ❑ Securing Boron injection if any was started. ❑ Restoring RPV level to +8 to +48 inches.
	NSO	Reports that all rods inserted and performs the following as directed: ❑ Restores level to +8 to +48 inches.
		Scenario Completion Criteria: - Control Rods Inserted. - RPV level stabilized. - OR, at the direction of the NRC Chief Examiner.

Critical Tasks: Identified by √ in Guide

- ❑ With a reactor scram required and the reactor not shutdown, ***TAKE ACTION TO REDUCE POWER*** by injecting boron and/or inserting control rods, to prevent exceeding the primary containment design limits.
- ❑ With a reactor scram required, reactor not shutdown, and conditions for ADS blowdown are met, ***INHIBIT ADS*** to prevent an uncontrolled RPV depressurization, to prevent causing a significant power excursion.
- ❑ During an ATWS with conditions met to perform power/level control ***TERMINATE AND PREVENT INJECTION***, with exception of boron and CRD, into the RPV until conditions are met to re-establish injection.
- ❑ When conditions are met to re-establish injection use available injection systems to ***MAINTAIN*** RPV water level above -164"**.**

REFERENCES

PROCEDURE	TITLE	REVISION
DAN 902-4 A-15	ISOL CONDR CH A/B INITIATION	14
DAN 902-6 G-10	LOW FLOW REG VLV LOCKUP	4
DAN 902-6 H-3	FW CONTROL SYSTEM PANEL TROUBLE	5
DAN 923-1 C-3	U2 OR U3 SERV WATER PP TRIP	2
DOP 0400-01	Reactor Manual Control System Operation	18
DOP 0600-06	Feedwater Regulating Valve (FRV) Operation	25
DOA 0300-06	RPIS Failure	14
DOA 5750-04	Smoke, Noxious Fumes or Airborne Contaminants In The Control Room	16
DOA 6500-10	4KV Circuit Breaker Trip	03
DGP 01-01	Unit Startup	101
DGP 02-03	Reactor Scram	60
DGP 03-04	Control Rod Movements	43
DGA 07	Unpredicted Reactivity Addition	14
DGA 16	Coolant High Activity/Fuel Element Failure	12
DEOP 0100-00	RPV Control	10
DEOP 0200-01	Primary Containment Control	10
DEOP 0300-01	Secondary Containment Control	07
DEOP 0400-02	Emergency Depressurization	04
DEOP 0400-05	Failure to Scram	12
DEOP 0500-02	Bypassing Interlocks and Isolations	12
DEOP 0500-05	Alternate Insertion of Control Rods	13

PRE-SCENARIO ACTIVITIES

1. If applicable, conduct pre-scenario activities in accordance with TQ-AA-106-0107, SIMULATOR EXAMINATION BRIEFING.
   a. Provide the team with a copy of Control Room work request list.
   b. Provide the team with a copy of DGP 01-01, Unit Startup, which is marked up to the point of Step 78, Turbine testing complete and ready to synchronize the Main Generator to the Grid.
   c. If the team inquires about a startup plan, inform then the Shift Manager is maintaining it.
   d. Provide the team with a copy of the REMA.
   e. Inform the team that (select an individual) is the QNE present in the Control Room.
   f. Direct the team to perform their briefs prior to entering the simulator.
2. Simulator Setup (the following steps can be done in any logical order)
   a. Initialize simulator in IC 10 and perform the following prior to proceeding below:
      1) Bring up “Monitor”
      2) At “input” box, type ‘FLZ1265’ and <Enter>.
      3) At “input” box, type ‘1=F’ and <Enter>.
      4) Verify variable FLZ1265 is set to FALSE.
      5) Goto Run and ensure variable stays FALSE.
      6) Run the Summary program and clear ALL remotes and overrides.
      7) Verify 2A EHC and 2A Stator Cooling Water pumps running.
      8) Verify backpanel lights are reset.
      9) Start 2E Drywell Cooler.
      10) Open OCB 2-3 and OCB 2-7 at Panel 923-2.
      11) Open OCBs for Generator at Panel 902-8.
      12) Close Generator Field Breaker at Panel 902-8.
      13) Close MPT Disconnect at Panel 902-8.
   b. Run the initial setup caep file: **ilt-r-3.cae**
   c. Verify the following simulator conditions:
      1) MWe at ~245.
      2) Condensate Demin DP between 20 and 45 psid.
      3) Condensate pump amps between 160 and 255 amps.
   d. Secure the following equipment and tag out of service:
      1) Place IRM 15 902-5 panel joystick in bypass and place an Equipment Status Tag on it.
      2) Place 2B EHC Pump control switch in PTL and hang an OOS card on it
   e. Advance the chart recorders.
   f. Mark up rod sequence for current rod positions.
   g. Complete the Simulator Setup Checklist.

ILT 01-1 NRC EXAM SCENARIO ILT-R-3 Initial Setup CAEP:

```
# ilt-r-3.cae
# Setup for ilt-r-3
#Written by MO
#Rev 00
#Date 10/02

# INITIAL CONDITIONS

# Inserts a hydraulic lock of the SDV
imf rdhlvfpa 93
imf rdhlvfpb 93
imf rdhldega 95
imf rdhldegb 95


# Sets both SBLC relief valves to 50 psig
imf scrlfvad 50
imf scrlfvbd 50


# Prevents an isolation of HPCI
imf hp4vlbn



#SETUP EVENT TRIGGERS

# Event Trigger 1 inserts a blown fuse on the LFRV causing it to lock up
trgset 1 "0"
imf rlmlfbf (1)

# Event Trigger 2 replaces the blown fuse allowing the LFRV lock up to br rest
trgset 2 "0"|2
trg 2 "dmf rlmlfbf"

# Event Trigger 3 causes a drift of the isolation condenser setpoint causing a spurious initiation of the isolation
condenser
trgset 3 "0"|3
imf icspdft (3) 900.0 2:00|3


# Event Trigger 4 ramps up the amps on the 2D condensate pump over two minutes
trgset 4 "0"|4
ior fwicp4 (4) 300 2:00|4


# Event Trigger 5 inserts a trip of the 2A service water pump
trgset 5 "0"
imf q21 (5)|5


# Event Trigger 6 inserts a 2.5% FEF and starts a HPCI line break at the 2301-5 valve ramping to 100% in 2
minutes
trgset 6 "0"|2
imf radffd (6) 2.5
imf hprbbrkp (6) 100.0 2:00 |2
```

```
# Event Trigger 7 Installs RPS scram jumpers
trgset 7 "0"|3
irf rpjumpas (7) on|3


# Event Trigger 8 defeats all Group I isolation signals.
trgset 8 "0"
irf cigp1jp (8) in|6
irf ci59jp (8) in|6
irf ogogjp (8) in|6


# Event Trigger 9 lifts drywell cooler leads per DEOP 500-2
trgset 9 "0"
irf cidw28jp (9) in
irf cidw29jp (9) in


# Event Trigger 10 clears the high amps on the condensate pump
trgset 10 "fwdcbpn4 .ne. 1"|6
trg 10 "dor fwicp4"|6



# Event Trigger 12



# END
```

Date: TODAY

Unit 2 Turnover

ECCS Status: **All**

Online Information

0 MWe

Online Risk: Green CDF: 1.00

Risk Equipment:

MODE 1

Shutdown Information

Time to Boil: N/A

Shutdown Risk: N/A

Protected Path: N/A

Unit 2 Priorities

Continue startup

Station Priorities

LCORAs

LCORA #
Title

Start
Clock Ends

Shift 1 Activities (X = Completed)	**Shift 2 Activities**	**Shift 3 Activities**
☐	☐ Continue Power Ascension	☐
☐	☐	☐

Common Unit Activities

Shift 1 Activities (X = Completed)	**Shift 2 Activities**	**Shift 3 Activities**
☐	☐	☐
☐	☐	☐

Common Unit Procedures / Surveillances in Progress

Unit 2 Conditions, Status, Abnormalities

2 hr ago	0500	IRM 15 OOS due to power supply failure. IMD waiting for replacement power supply to arrive from Quad Cities Station. Placed in DEL for tracking.
6 hr ago	5650	2B EHC pump OOS due to a problem with its pressure compensator. Expected BIS next shift.

Compensatory Actions, Extra Checks

Equipment OOS

2 hr ago	990045654	IRM 16
6 hr ago	990045652	2B EHC pump

Service Unit Status

9 days ago	2A Cond Demin	Cut In
7 days ago	2B Cond Demin	Cut In
16 days ago	2C Cond Demin	Cut In
2 days ago	2D Cond Demin	Cut Out
11 days ago	2E Cond Demin	Cut Out
6 days ago	2F Cond Demin	Cut Out
2 days ago	2G Cond Demin	Cut Out
376 days ago	2A RWCU	Cut In
240 days ago	2B RWCU	Cut Out
20 days ago	2C RWCU	Cut Out
76 days ago	U2 FPC Demin	Cut In

Unit 2 Abnormal Component Position

U2 Open Operability Determinations with Compensatory Actions

Events and Misc. Information

DGP 01-01 in progress. Continue the startup. Rod moves completed. Ready to increase power with recirculation flow. The QNE is present in the control room.

DW samples:

Iodine 131	2.5×10^{-13}
Beta/Gamma	1.5×10^{-11}

Date: TODAY

Unit 3 Turnover

ECCS Status: **All available**

Online Information

910 MWe

Online Risk: GREEN

Risk Equipment: None

MODE 4

Shutdown Information

Time to Boil: N/A.

Shutdown Risk: N/A

Protected Path: N/A

Unit 3 Priorities

Continues safe full power ops

Station Priorities

LCORAs

LCORA # None
Title

Start
Clock Ends

Shift 1 Activities (X = Completed)	**Shift 2 Activities**	**Shift 3 Activities**
☐	☐	☐
☐	☐	☐

Common Unit Activities

Shift 1 Activities (X = Completed)	**Shift 2 Activities**	**Shift 3 Activities**
☐	☐	☐
☐	☐	☐

Common Unit Procedures / Surveillances in Progress

None

Unit 3 Conditions, Status, Abnormalities

IMD taking voltage readings in the EHC Control Panel 903-31.

Compensatory Actions, Extra Checks

None

Equipment OOS

None

Service Unit Status

5 days ago	3A Cond Demin	Cut In
8 days ago	3B Cond Demin	Cut In
10 days ago	3C Cond Demin	Cut In
5 days ago	3D Cond Demin	Cut In
3 days ago	3E Cond Demin	Cut In
15 days ago	3F Cond Demin	Cut In
3 days ago	3G Cond Demin	Cut In
750 days ago	3A RWCU	Cut In
390 days ago	3B RWCU	Cut Out
60 days ago	3C RWCU	Cut Out
444 days ago	U3 FPC Demin	Cut In

Unit 3 Abnormal Component Position

None

U3 Open Operability Determinations with Compensatory Actions

None

Events and Misc. Information

None