SIMULATOR EXAMINATION SCENARIO

SCENARIO TITLE: ATWT/SGTR

SCENARIO NUMBER: FOXTROT NRC ESG-1

EFFECTIVE DATE: Per Approval Signatures

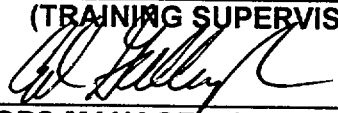
EXPECTED DURATION: 75-90 minutes

REVISION NUMBER: VALIDATION

PROGRAM:

- [ ] **L.O. REQUAL**
- [X] **INITIAL LICENSE**
- [ ] **STA**
- [ ] **OTHER** _____ _____

Revision Summary

PREPARED BY:	J.K. Lloyd **(DEVELOPER)**	2/24/2001 **(DATE)**
REVIEWED BY:	 **(EP REPRESENTATIVE)**	5/4/01 **(DATE)**
APPROVED BY:	 **(TRAINING SUPERVISOR)**	5/7/01 **(DATE)**
APPROVED BY:	 **(OPS MANAGER OR DESIGNEE)**	5-8-01 **(DATE)**

I. OBJECTIVES

Enabling Objectives

A. Conduct a normal power reduction IAW S2.OP-IO.ZZ-0004
B. Respond to failure of a VCT level channel IAW S2.OP-AR.ZZ-0012
C. Respond to failure of a PRNIS Channel IAW S2.OP-AB.NIS-0001
D. Evaluate technical specifications and implement action statements
E. Enter and execute the EOP network IAW SC.OP-AP.ZZ-0102(Q)
F. Respond to an ATWT IAW 2-EOP-TRIP-1 and 2-EOP-FRSM-1
G. Establish AFW flow IAW 2-EOP-FRSM-1
H. Respond to a partially open PZR PORV IAW the EOP Network
I. Diagnose and respond to a SGTL/SGTR IAW 2-EOP-TRIP-1 and 2-EOP-SGTR-1

II. MAJOR EVENTS

A. Begin a 15% power reduction
B. VCT Level Channel LT-112 fails high
C. PRNIS Channel N-44 fails high
D. AUTO Turbine Trip w/o Rx Trip from control room
E. PZR PORV fails partially open during ATWT
F. 22 and 23 AFW Pump fail to start automatically
G. SGTL progresses to SGTR after the reactor is tripped

III. SCENARIO SUMMARY

The crew assumes the watch with the unit at 100% power (MOL) and instructions to lower power to 85% so that 21 Condensate Pump can be removed from service for motor inspection. 21 AFW Pump is OOS due to a breaker alignment problem – 48 hours remains on the TSAS.

After the crew has started the power reduction, the Lead Evaluator will cue the first malfunction: VCT Level Channel LT-112 fails high. The crew should realign CV35 to the VCT and determine that MANUAL makeup will be required, if necessary.

On cue from the Lead Evaluator, PRNIS Channel N-44 fails high. The RO should respond to the rod motion, diagnose the situation and place Rod Control in MANUAL. The CRS should request assistance from I&C and implement Technical Specifications.

After N-44 has been removed from service and Rod Control is returned to AUTO, an AUTO Turbine Trip/ATWT occurs. The reactor cannot be tripped from the control room. 22 AFW Pump breaker trips, 23 AFW Pump does not AUTO start and a PZR PORV fails partially open. The crew should enter TRIP-1 and then transition to FRSM-1. In FRSM-1, they should start 23 AFW Pump, close the isolation valve on the failed PORV and initiate a local reactor trip. At the transition from FRSM-1, a progressive SGTL begins in 23 SG. The crew should return to TRIP-1, transition to TRIP-2, diagnose the SGTR, initiate SI, transition back to TRIP-1 and progress to SGTR-1. The Lead Evaluator can terminate the scenario after the crew has dispatched an operator to manually isolate the steam supply from 23 SG to 23 AFW Pump, thereby terminating a release.

IV. INITIAL CONDITIONS

____ IC-181 Snapped to Disk (Password: catdog)

MALFUNCTIONS:

CHECK		Description	Delay	Ramp	Trigger	Severity
____	1.	RP0058: Failure of AUTO RX TRIP				
____	2.	RP0059A: Failure of MAN RX TRIP				
____	3.	RP0059B: Failure of MAN SI/RX TRIP				
____	4.	AF0181B: 22 AFW Pump trip				
____	5.	CV0037: LT-112 (VCT) fails HI			1	100%
____	6.	NI0193D: PRNIS N-44 fails HI			2	200%
____	7.	TU0066: Inadvertent turbine trip			3	
____	8.	VL0297: 2PR1 fails open			3	10%
____	9.	SG0078C: 23 SGTR		10 mins.	5	0-600gpm
____	10.	AN0376: OHA A-28 alarm			6	2

REMOTES:

SELF-CHECK		Description	Delay	Ramp	Trigger	Condition
____	1.	AF21D: 21 AFWP racked out				TAGGED
____	2.	AF20D: 21 AFWP control power				OFF
____	3.	RC04D: OTΔT Ch IV BS (441C)			7	TRIP
____	4.	RC08D: OTΔT Ch IV BS (441D)			8	TRIP

OVERRIDES:

CHECK		Description	Delay	Ramp	Trigger	Action
____	1.	B440 OVDI: RTB A				OFF
____	2.	B441 OVDI: RTB B				OFF
____	3.	C310 OVDI: 2E6D				OFF
____	4.	C510 OVDI: 2G6D				OFF

TAGGED EQUIPMENT:

CHECK		Description
____	1.	RH1 and RH2 (C/T)
____	2.	VC 1-4 (C/T)
____	3.	RH 18's (C/T)
____	4.	RCPs (SELF CHECK)
____	5.	RT (SELF CHECK)
____	6.	MS 167s (SELF CHECK)
____	7.	500 KV SWYD (SELF CHECK)
____	8.	SGFP TRIP (SELF CHECK)
____	9.	22 ABV Supply Fan (C/T)
____	10.	23 Charging Pump (C/T)
____	11.	21 AFW Pump

OTHER CONDITIONS:

		Description
____	1.	Place plastic cover over 21 AFWP

V. SEQUENCE OF EVENTS

A. State shift job assignment.

B. Hold a shift briefing, detailing instruction to the shift: (provide crew members a copy of the shift turnover sheet)

C. Inform the crew "The simulator is running. You may commence panel walkdowns at this time. OS please inform me when your crew is ready to assume the shift".

D. Allow sufficient time for panel walk-downs. When informed by the OS that the crew is ready to assume the shift, ensure the simulator is cleared of unauthorized personnel.

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
1. Power reduction to 85% using normal plant procedures.	**CRS** briefs crew on reactivity plan supplied from Reactor Engineering and establishes rate of power reduction **CREW** notifies System Operator and Condensate Polishing Operator **PO** initiates load reduction: • Initiates monitoring Main Turbine Data display points on the Plant Computer • Removes Main Turbine Valve Position Limiter IAW SO.TRB-001 • Uses Rate Thumbwheel, REF ∇ and GO pushbuttons to attain desired load **RO** initiates boration	
Initiate next event (RT-1) on cue from the Lead Evaluator	**RO** maintains minimal T_{AVG}/T_{REF} mismatch and AFD within band **PO** verifies SG Feed Pump suction pressure is being maintained >300 psig **PO** monitors condenser temperatures using the plant computer	
RT-1: VCT Level transmitter LT-112 fails high **MALF: CV0037, Severity 100**	**RO** responds to VCT HI/LO LEVEL console alarm **RO** compares console level with computer indications and determines LT-112 is failed	
NOTE: Alarm Response Procedure does not give specific guidance for failed instrument	**CREW** refers to the CC2 Console Alarm Response Procedure **CRS** directs **RO** to select CV35 to MANUAL and align it to the VCT	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
Initiate next event (RT-2) on cue from the Lead Evaluator	**CRS/Crew** discuss related problems: • MANUAL M/U required if VCT level lowers • AUTO swap to RWST disabled	
RT-2: PRNIS N-44 Fails HI **MALF: NI0193D**	**RO** responds to rod motion and OHA alarms **RO** should: • Verify no runback in progress and rod motion is not required • Gain concurrence of **CRS** and place Rod Control in MANUAL	
NOTE: CRS may enter AB.ROD-3 first	**CRS** enters S2.OP-AB.NIS-0001 **RO** identifies N-44 as the failed channel **CRS** contacts I&C for assistance **CRS** initiates removal of channel from service IAW S2.OP-SO.RPS-0001	
SIM OP: As I&C Supvr, report that troubleshooting will begin within 15 minutes and inform CRS to have operator perform back panel operations. If asked, Control Rack 26 operations have been completed.		
	CRS directs **PO** to defeat N44 input on NIS Panels: • Detector Current Comparator (UPPER) • Detector Current Comparator (LOWER) • Power Mismatch Bypass • Comparator Channel Defeat • Pull Control Power fuses	
SIM OP: To take N-44 OOS when requested to trip bistables: • RT-6 – AN0376 (OHA A-28) • RT-7 – RC04D (BS 441C) • RT-8 – RC08D (BS 441D) • Clear RT-6		
	CRS refers to Tech Specs and enters 3.3.1.1, Actions 2 and 6	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
Initiate next event (RT-3) after rod control is in AUTO or on cue from the Lead Evaluator	**CRS** directs **RO** to return rods to AUTO after **PO** has defeated N-44 inputs	
RT-3: MN TURB INADVERTENT TRIP and 2PR1 FAILS OPEN **MALF: TU0066** **MALF: VL0297, Severity: 10%**		
	RO responds to OHA alarms and notes reactor trip demand signal present: Attempts MANUAL Reactor Trip • First Handle • Second Handle • RTBs • E6D and G6D • Reports Trip not confirmed • Initiates MANUAL Turbine Trip • Initiates Rod Insertion	
NOTE: Rod Control may be left in AUTO as long as rod speed exceeds 48 SPM		
	CRS transitions to FRSM-0001	
	PO report 21 and 22 AFW Pumps not running	
CT#1: Crew establishes AFW flow ≥44E04 prior to exiting FRSM-1 **SAT____ UNSAT____**	**CRS** directs **PO** to start 23 AFWP	
	PO verifies AF11's open	
Note: Crew may decide to not push override defeat with no motor driven pumps running	**PO** sets AF21 demands to 95% and presses PRESS OVERRIDE DEFEAT pushbuttons	
	RO starts 22 Charging Pump	
	RO reports SI not actuated	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
	RO: • Starts both BA Pumps in FAST • Opens 2CV175 • Closes 21 and 22CV160 • Maintains Charging Flow >87 gpm	
NOTE: Depending on crew response time, AUTO SI may occur	**RO** reports 2PR1 is open	
	RO/PO selects MANUAL and CLOSE on 2PR1 and reports valve not closing	
	RO closes 2PR6	
Sim. Operator: Open RTB's when the crew reaches Step 12 (Reactivity Insertion step): • Delete overrides on RTBs • Delete MALF RP0058 to trip reactor Open all Rod Drive MG Set breakers: • 21 Motor - RP007D • 22 Motor - RP008D • 21 Output - RP009D • 22 Output - RP010D	**CRS** dispatches NEO to open RTBs and Rod Drive MG set breakers	
	CRS dispatches a NEO to close WR70 and WR151's	
	CREW determines that RCS Temp is not dropping in an uncontrolled manner	
	RO verifies three operable PRs less than 5%	
	RO verifies IR startup rate negative	
	CRS directs chemistry to sample RCS	
	CRS directs STA/Rx. Eng. to perform a SDM	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
Initiate RT-5 on transition to TRIP-1 **RT-5: 23 SGTR** **MALF: SG0078C; SEV=0-600 gpm; RAMP=10 mins.**	**CRS** transitions to TRIP-1	
	RO verifies immediate actions of TRIP-1 completed	
	CRS transitions to TRIP-2	
	STA/CRS review CAS items	
	RO announces RX TRIP, twice	
NOTE: Highest classification reached is SAE, Sect. 5.1.3 (ATWT)	**CRS** directs OS to implement the ECG	
	PO stops 21 and 22 SGFP	
	RO reports RCS temperature being controlled	
	PO closes 21-24BF22	
NOTE: PO may report rising level in 23 SG and/or 2R15 will go into WARNING, alerting crew to SGTL. The CRS may concurrently implement AB.SG-1.	**CREW** continues implementation of TRIP-2	
	CRS directs **RO** to initiate MANUAL SI due to worsening conditions	
	RO initiates MANUAL SI	
	CRS transitions to TRIP-1	
	RO/PO verify SEC loading complete	
	RO reports valves in safeguards positions	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
NOTE: Dependent on crew response time, this may not occur	**RO** closes 2CV139 and 2CV140 if/when CAS criteria is met	
NOTE: Dependent on crew response time, this may not occur	**RO** stops all RCP's if/when CAS criteria is met	
NOTE: Until the diagnostics section, most TRIP-1 steps have been completed in FRSM-1 or TRIP-2	**CREW** continues implementation of TRIP-1	
CT#2: Close 23AF11 and 21 within 10 minutes after the crew recognizes a SGTR has occurred **TIME:**_____	**CREW** performs diagnostic activities including: • LOSC • SGTR	
	PO reports 23 SG level rising in an uncontrolled manner and/or 2R15 in WARNING or ALARM	
TIME:_____ **SAT**_____**UNSAT**_____	**PO** closes 23AF11and 21	
	CRS transitions to SGTR-1	
	PO sets 23MS10 to ≥1045 psig	
	PO closes 23MS167 and verifies 23MS18, 23MS7, 23GB4 closed	
	PO reports 23 SG ruptured and 23 AFWP is the only source of feed flow	
	CREW determines 23 SG is NOT the only steam supply for 23 AFWP	
CT#3: Dispatch an operator to terminate the release via 23 AFWP exhaust when the applicable series of steps are read. **SAT**_____**UNSAT**_____	**CREW** dispatches NEO with RADPRO support to close 23MS45	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
Lead Evaluator can terminate the scenario anytime after the NEO has been dispatched to close 23MS45. It should be terminated prior to commencing a RCS cooldown in order to avoid conflict with a Sim JPM scheduled for this exam.		

VI. SCENARIO REFERENCES

A. Alarm Response Procedures (Various)
B. Technical Specifications
C. Emergency Plan (ECG)
D. SC.OP-AP.ZZ-0102(Q), Use of Procedures
E. S2.OP-IO.ZZ-0004, Power Operations
F. S2.OP-AR.ZZ-0012, Console Alarms (VCT)
G. S2.OP-SO.TRB-001, Turbine Generator Startup Operations
H. S2.OP-AB.ROD-0003, Continuous Rod Motion
I. S2.OP-AB.NIS-0001, NIS Malfunction
J. 2-EOP-TRIP-1, Reactor Trip or Safety Injection
K. 2-EOP-TRIP-2, Reactor Trip Response
L. 2-EOP-FRSM-1, Response to Nuclear Power Generation
M. 2-EOP-SGTR-1, Steam Generator Tube Rupture

SIMULATOR EXAMINATION SCENARIO

SCENARIO TITLE: LOHS

SCENARIO NUMBER: FOXTROT NRC ESG-2

EFFECTIVE DATE: Per Approval Signatures

EXPECTED DURATION: 75-90 minutes

REVISION NUMBER: VALIDATION

PROGRAM:

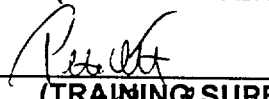
[ ] **L.O. REQUAL**

[X] **INITIAL LICENSE**

[ ] **STA**

[ ] **OTHER** _____

Revision Summary

PREPARED BY:	J.K. Lloyd **(DEVELOPER)**	2/25/2001 **(DATE)**
REVIEWED BY:	 **(EP REPRESENTATIVE)**	5/4/01 **(DATE)**
APPROVED BY:	 **(TRAINING SUPERVISOR)**	5/7/01 **(DATE)**
APPROVED BY:	 **(OPS MANAGER OR DESIGNEE)**	5/8/01 **(DATE)**

I. OBJECTIVES

Enabling Objectives

A. Perform a power ascension IAW S2.OP-IO.ZZ-0004

B. Respond to a failed PZR Pressure channel IAW S2.OP-AB.PZR-0001

C. Evaluate and implement applicable Technical Specifications

D. TCAF a SGFP trip IAW AB.CN-0001

E. Take compensatory action for failure of the auto control rod speed controller IAW AB.CN-1

F. Initiate a MANUAL Rx TRIP IAW AB.CN-1 when the running SGFP trips

G. Enter and execute the EOP network IAW SC.OP-AP.ZZ-0102(Q)

H. Initiate a reactor trip by properly executing the immediate actions of TRIP-1

I. Recover 2A 4KV Vital Bus IAW LOPA-1

J. Establish RCS feed and bleed IAW FRHS-1

II. MAJOR EVENTS

A. Power ascension

B. PZR Pressure Channel failure

C. SGFP manual trip on degrading LO pressure trip with AUTO rod speed failed to 8 SPM

D. MANUAL or AUTO reactor trip on loss of second SGFP

E. 23 AFW Pump trips during auto start sequence

F. Loss of all AC power and recovery of only 2A 4KV Vital Bus results in LOHS

G. RCS feed and bleed using 21 SI Pump

III. SCENARIO SUMMARY

The scenario begins with the crew raising power from 90% to 100%. 21 AFW Pump is OOS for bearing replacement. There are 48 hours remaining on the associated action statement.

On cue from the Lead Evaluator, the controlling PZR pressure channel fails high. The crew should respond in accordance with (IAW) S2.OP-AB.PZR-0001, remove the channel from service and implement the correct technical specification.

After the plant is stabilized and on cue from the Lead Evaluator, a control oil leak develops on 21 SGFP. Oil pressure continues to degrade requiring a MANUAL trip of the SGFP, resulting in an AUTO Runback initiation. During the runback, auto rod speed fails to 8 SPM. The crew should respond IAW S2.OP-AB.CN-0001 and the RO should insert the rods in MANUAL.

When the crew has stabilized the plant, the remaining SGFP will trip. The CRS should order a MANUAL reactor trip. The reactor will trip when the reactor trip breakers are opened by the RO, during performance of the immediate actions. Shortly after the trip, a loss of all AC power occurs and 23 AFW Pump trips on overspeed. The crew should enter EOP-TRIP-1 and transition to EOP-LOPA-1, LOSS OF ALL AC POWER. In LOPA-1, the crew recovers 2A 4KV Vital Bus but that leaves them with no AFW Pump and no Charging Pump. The crew should transition to 2-EOP-FRHS-1, RESPONSE TO LOSS OF SECONDARY HEAT SINK (FRHS-1) and initiate RCS feed and bleed using 21 SI Pump.

After feed and bleed has been established, the scenario can be terminated at the Lead Evaluator's discretion.

IV. INITIAL CONDITIONS

____ IC-182 , Snapped to disk , Password: catdog

MALFUNCTIONS:

SELF-CHECK	Description	Delay	Ramp	Trigger	Severity
____ 1.	AF0183: 23 AFWP Overspeed				
____ 2.	RP0058: AUTO Rx Trip failure				
____ 3.	RP0059A: MAN Rx Trip failure				
____ 4.	RP0059B: MAN SI/Rx Trip failure				
____ 5.	PR0016A: PP Ch. I fails high			1	2500
____ 6.	BF0105A: 21 SGFP LO problem			2	
____ 7.	RD0061: Auto Rod Speed Program fails			2	8
____ 8.	BF0105B: 22 SGFP trips			3	3
____ 9.	EL0134: Loss of all Off-Site Power			4	
____ 10.	EL0273A: 2A EDG Brkr auto close failure			4	
____ 11.	EL0163: 2C EDG trip			4	
____ 12.	EL0145: Loss of 2B 4KV Vital Bus			4	

REMOTES:

SELF-CHECK		Description	Delay	Ramp	Trigger	Condition
____	1.	AF20D: 21 AFWP Control Power				OFF
____	2.	AF21D: 21 AFWP Brkr racked out				TAGGED
____	3.	DG01D: De-energize 2A SEC			5	YES
____	4.	DG02D: De-energize 2B SEC			6	YES
____	5.	DG03D: De-energize 2C SEC			7	YES
____	6.	SJ21A: Manually position 2SJ1			8	98
____	7.	CV58A: Manually position 2CV40			9	0

OVERRIDES:

CHECK		Description	Delay	Ramp	Trigger	Action
____	1.	OVDI CB05 2A EDG Brkr CLOSE				OFF

TAGGED EQUIPMENT:

CHECK		Description
____	1.	RH1 and RH2 (C/T)
____	2.	VC 1-4 (C/T)
____	3.	RH 18's (C/T)
____	4.	RCPs (SELF CHECK)
____	5.	RT (SELF CHECK)
____	6.	MS 167s (SELF CHECK)
____	7.	500 KV SWYD (SELF CHECK)
____	8.	SGFP TRIP (SELF CHECK)
____	9.	22 ABV Supply Fan (C/T)
____	10.	23 Charging Pump (C/T)
____	11.	21 AFW Pump

OTHER CONDITIONS:

		Description
____	1.	Ensure PP Channel I selected for control
____	2.	Place plastic cover over 21 AFW Pump

V. SEQUENCE OF EVENTS

A. State shift job assignments:

B. Hold a shift briefing, detailing instruction to the shift: (provide crew members a copy of the shift turnover sheet)

C. Inform the crew "The simulator is running. You may commence panel walkdowns at this time. OS please inform me when your crew is ready to assume the shift".

D. Allow sufficient time for panel walk-downs. When informed by the OS that the crew is ready to assume the shift, ensure the simulator is cleared of unauthorized personnel.

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
1. Power Ascension	**CRS** briefs crew on reactivity plan supplied from Reactor Engineering and establishes rate of power reduction **CREW** notifies the Systems Operator and the Condensate Polishing Operator of the upcoming power ascension **PO** initiates power ascension: • Initiates monitoring Main Turbine Data display points on the Plant Computer • Removes Main Turbine Valve Position Limiter IAW SO.TRB-001 • Uses Rate Thumbwheel, REF and GO pushbuttons to attain desired load **RO** initiates RCS dilution	
Initiate the next event (RT-1) on cue from the Lead Evaluator	**RO** maintains T_{AVG}/T_{REF} and AFD within the target band using Auto Rod motion and dilution	
RT-1: Pressurizer Pressure Channel I fails high MALF:PR0016A, Severity: 2500	**CREW** responds to indications/alarms • OHA D-8, RC PRESS HI • OHA E-42, 2PR1 1/2 • RC PRESSURE DEVIATION HI console alarm • PS1 & 2 full open • Actual PZR pressure lowering **RO** responds to the transient: • Evaluates indications and determines PP Channel I failed • Obtains concurrence of the **CRS** and places the Master Pressure Controller in MANUAL • Closes both Spray Valves and energizes all PZR Heaters by depressing the PRESSURE INCREASE pushbutton	

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
	CRS enters AB.PZR-1, Pressurizer Pressure Malfunction. **RO** selects PP Channel III to CONTROL **RO** returns Master Pressure Controller to AUTO **CRS** directs **RO** to place 2PR1 in MANUAL and close 2PR6	
Sim Op: 2PR6 C/T is PR34D	**CRS** directs WCC or a NEO to remove power from 2PR6 **CRS** initiates actions of S2.OP-SO.RPS-0003, Placing PZR Channel in Tripped Condition **CREW** notifies I&C for assistance	
NOTE: If pressure falls below 2205 psig, the DNB LCO (3.2.5) also applies	**CRS** reviews and enters Tech Specs. • 3.3.1.1, Action 6 • 3.3.2.1, Action 19 • 3.4.5, Action b	
Initiate the next event after TSAS determination(s) and on cue from the Lead Evaluator		
RT-2: 21 SGFP Degrading LO Pressure + AUTO Rod Speed Failure **MALF: BF0105A** **MALF: RD0061** **NOTE: Crew may elect to manually trip 21 SGFP**	**PO** responds to SGFP console alarms: • Console alarm • SGFPLO Stdby Pump starts **CRS** implements Console Alarm Procedure S2.OP-AR.ZZ-0012 **PO** verifies Standby Lube Oil Pump started	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
ROLE PLAY: 3 minutes later NEO reports a large leak on a control oil line for 21 SGFP. Oil is spraying all over – the SGFP and oil pumps need to be stopped ASAP.	**CRS** dispatches an NEO to investigate	
	PO acknowledges Emergency Oil Pump start	
	CRS directs operators to reduce power IAW AB.LOAD-1 or directs MANUAL TRIP of 21 SGFP	
	CRS enters AB.CN-1 when 21 SGFP trips	
	Crew performs actions of AB.CN-1: • **PO** verifies 22 SGFP in service • **PO** verifies PT505/506 both in service • **PO** verifies Automatic Turbine Runback in progress • **RO** ensures Rod Control in AUTO	
NOTE: AFD may exceed Target Band. If so, TSAS 3.2.1.a.2 applies	**RO** recognizes rod speed is incorrect and takes MANUAL control	
	CRS initiates AB.CN-1, Att. 1 (CAS)	
After plant is stabilized, initiate next event (RT-3) on cue from the Lead Evaluator	**PO** monitors SG NR levels	
	RO initiates RCS boration	
	PO verifies 21-23 CN108 OPEN	
	PO verifies 2CN47 is OPEN	
	RO maintains Tave on program (±1.5°F)	
	RO energizes PZR heaters	
	RO stops boration, as appropriate	
	PO verifies Condenser Steam Dump demand 0% and resets LOAD REJECTION	

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
	PO restores flow through Condensate Polisher	
	CRS informs chemistry of RCS sample requirement	
	CRS informs OS and/or OM of SGFP trip and runback	
	CRS requests Site Services help to cleanup oil spill	
RT-3: 22 SGFP TRIPS **MALF:BF105B**		
	PO reports loss of 22 SGFP	
Initiate RT-4 (Loss of all AC) when the reactor trip occurs. **RT-4:** **MALF:EL0134** **MALF:EL0273A** **MALF:EL0163** **MALF:EL0145**	**CRS** orders a MANUAL Reactor Trip	
	RO performs immediate actions: • Attempts MANUAL Rx trip, both Trains • Opens both RTB's • Trips turbine • Reports no vital buses energized	
	CRS transitions to EOP-LOPA-1	
SIM OP: See **EDG ROLE PLAY** on page after the next one. That Role Play may be required shortly after LOPA-1 is entered.	**RO** verifies Rx and Turbine Trip	
	RO verifies PZR PORV's closed	
	RO closes 2CV2, 2CV277 and verifies 2CV278 and 2CV131 closed	
	PO reports no AFW flow and 23 AFW Pump tripped	
AFW ROLE PLAY: In approx. 5 minutes, report that the governor	**CREW** dispatches NEO to check 23 AFW Pump	

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
valve stem appears to have failed and is broken off just below the connection to the linkage		
	RO announces Rx Trip	
	CRS informs OS to implement ECG	
SEC ROLE PLAY: In approx. 2 mins. sequentially (approx. 15 secs. apart) initiate RT-5, RT-6, RT-7 and call Control Room RT-5 – REMOTE: DG01D RT-6 – REMOTE: DG02D RT-7 – REMOTE: DG03D	**CREW** dispatches NEO to de-energize SEC's	
NOTE: CREW should stop 2A and 2C EDG based on "NO SW CAS." May attempt to close 2A EDG Brkr before stopping any diesels.	**CREW** stops 2A and 2C EDG's.	
ROLE PLAY: Have 3rd NCO report to Control Room for instructions	**CRS** contacts OSC/WCC for an operator to perform the Blackout Coping actions	
NOTE: This step should not be performed until all SEC's are de-energized	**RO** depresses STOP PB for all of the following • 21-26 SW Pump • 21-23 CCW Pump • 21 and 22 RHR Pump • 21 and 22 SI Pump • 21-25 CFCU • 21 and 22 CS Pump • 21-23 Charging Pump (23 is C/T)	
EDG ROLE PLAY: Report no apparent problems and no local alarms on 2A EDG. Shortly thereafter, report 2C EDG trip on LO LO Pressure – oil all over the place. **NOTE:** Control Room crew should diagnose the 2B failure as a bus problem, based on alarms. **ROLE PLAY:** WCC REPORTS 2a edg Brkr was not aligned properly in cubicle. It has been aligned and shouod now operate propwerly. **SIM OPERATOR:** Delete OVDI on 2A EDG (CB05)	**CREW** dispatches NEO to investigate EDG problems	

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
	CRS directs **PO** to start and load 2A EDG	
	PO starts 2A EDG and selects 2A EDG breaker on MIMIC BUS and CLOSE on the bezel	
	CRS directs **RO** to start 21 or 22 SW Pump	
CT#1: Start only one SW Pump on the energized bus before the EDG trips on any SW related alarm **SAT_____UNSAT_____**	**RO** starts 21 or 22 SW Pump	
	RO closes 21SW20 (Turb. Area Stop)	
	CREW dispatches NEO to monitor 2A EDG	
	PO reports 2A 4KV Vital Bus energized	
	RO reports SI not actuated or required	
NOTE: Crew may start the second SW Pump after reviewing 2A EDG loading	**CRS** directs starting of Blackout loads: • 21 CCW Pump • 21 ABV Exhaust Fan • 21 Rx Shield Vent Fan • 21 Rx Nozzle Support Vent Fan • 21 Chiller	
ROLE PLAY: Initiate RT-8 and make report shortly after contacted RT-8 – REMOTE:SJ21A	**CREW** dispatches NEO to open 2SJ1	
ROLE PLAY: Initiate RT-9 and make report shortly after contacted RT-9 – REMOTE:CV58A	**CREW** dispatches NEO to close 2CV40	
	CREW dispatches NEO to manually close 2SW26	
	PO reports 2A Vital Bus energized	

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
	CRS transitions to FRHS-1	
	RO reports RCS pressure >SG pressure	
	RO reports Thot >350°F	
	RO reports 21 or 22 Charging Pump not available	
	CRS goes to Step 23, Bleed and Feed Initiation	
	RO verifies all RCP's stopped	
	RO initiates SI	
NOTE: The crew should continue in the procedure since the valves in Table 3 are in the Charging Pump flowpath. If necessary and to expedite the scenario, the Lead Evaluator can direct the STA to recommend continuing in the procedure while the valves are being positioned.	**CREW** checks Safeguards Valves position and dispatches NEO's, as necessary	
	RO reports 21 or 22 Charging Pump not running	
CT#2: Establish ECCS flow prior to opening the PZR PORV's **SAT_____UNSAT_____**	**CRS** directs start of 21 SI Pump **RO** starts 21 SI Pump	
	RO verifies the following valves open: • 2SJ30 (RWST Suction Stop) • 21SJ33 (21 SIP Suction Stop) • 2SJ135 (CL Disch. Stop) • 21SJ134 (21 SIP CL Disch.)	
NOTE: CRS should contact WCC to restore power to 2PR6 **SIM OP:** Untag 2PR6 using remote PR34D and make report	**RO** reports 2PR6 is closed and de-energized	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
	RO opens 2PR1 and 2PR2	
CT#3: Provide a bleed path through both PORV's by NLT Step 30 (MAINTAIN PZR PORV'S OPEN) **SAT_____UNSAT_____**	**RO** opens 2PR6 when power is restored	
	CRS assigns crew member to perform APPX-3	
TERMINATE THE SCENARIO AT LEAD EVALUATOR DISCRETION		

Note: If loss of all AC is >15 min then General Emergency 7.1.4.c

If loss of all AC is <15 min then Site Area Emergency
3.1.1.b and 3.2.1.b or 8.1.3.c

VI. SCENARIO REFERENCES

A. Alarm Response Procedures (Various)
B. Technical Specifications
C. Emergency Plan (ECG)
D. SC.OP-AP.ZZ-0102(Q), Use of Procedures
E. S2.OP-IO.ZZ-0004, Power Operation
F. S2.OP-SO.TRB-0001, Turbine Generator Operation
G. S2.OP-AB.PZR-0001, PZR Pressure Abnormality
H. S2.OP-AB.CN-0001, Feedwater/Condensate Abnormality
I. 2-EOP-TRIP-1, Reactor Trip or Safety Injection
J. 2-EOP-LOPA-1, Loss of All AC Power
K. 2-EOP-FRHS-1, Response to Loss of Secondary Heat Sink

SIMULATOR EXAMINATION SCENARIO

SCENARIO TITLE: All SG's Faulted

SCENARIO NUMBER: FOXTROT NRC ESG-4

EFFECTIVE DATE: Per Approval Signatures

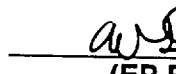
EXPECTED DURATION: 75-90 minutes

REVISION NUMBER: VALIDATION

PROGRAM:

- [ ] **L.O. REQUAL**
- [X] **INITIAL LICENSE**
- [ ] **STA**
- [ ] **OTHER** _____

Revision Summary:

PREPARED BY:	J.K. Lloyd **(DEVELOPER)**	3/3/2001 **(DATE)**
REVIEWED BY:	 **(EP REPRESENTATIVE)**	5/4/01 **(DATE)**
APPROVED BY:	 **(TRAINING SUPERVISOR)**	5/7/01 **(DATE)**
APPROVED BY:	 **(OPS MANAGER OR DESIGNEE)**	5-8-01 **(DATE)**

I. OBJECTIVES

Enabling Objectives

A. Perform a power ascension IAW S2.OP-IO.ZZ-0004
B. Take corrective action for a leaking PZR PORV IAW S2.OP-AB.PZR-0001
C. Evaluate and implement required Technical Specifications
D. Take corrective action for a failed Tc instrument IAW S2.OP-AB.ROD-0003
E. Respond to a steam leak IAW S2.OP-AB.STM-0001
F. Enter and execute the EOP network IAW SC.OP-AP.ZZ-0102(Q)
G. Take corrective action for multiple faulted SG's IAW the EOP network
H. Take compensatory action for failure of a SEC IAW the EOP network
I. Manually energize the SRNIS IAW the EOP network

II. MAJOR EVENTS

A. Begin raising power
B. Leaking PORV
C. Tcold fails high causing inward rod motion
D. Main Steam leak inside containment
E. Main Steamline break inside containment
F. Failure of all MS167's
G. 22 CCP fails to start on SEC actuation signal
H. Loss of 2A Vital Bus
I. Containment Phase B isolation fails to auto actuate
J. Insufficient SW flow to 22 and 24 CFCU's

III. SCENARIO SUMMARY

The crew assumes the watch with the unit at 25% power and directions to raise power at 5%/hour. 22 SI Pump is C/T OOS for motor bearing replacement.

On cue from the Lead Evaluator, a leak develops through 2PR1, PZR PORV. The crew should determine the leaking valve and isolate the leak IAW S2.OP-AB.PZR-0001, PZR Pressure Malfunction.

After implementation of the PZR PORV technical specification and on cue from the Lead Evaluator, 21 RCS loop Tcold fails high. The crew should take corrective action IAW S2.OP-AB.ROD-0003, Continuous Rod Motion, remove the instrument from service, return rod control to AUTO and implement the correct technical specification.

After implementation of the RCS temperature technical specification and on cue from the Lead Evaluator, a progressive steam leak will begin on 24 SG (inside containment). The crew should diagnose the steam leak and respond IAW S2.OP-AB.STM-0001, Steam Leak. The leak develops to a magnitude where the CRS should order a manual reactor trip, SI and main steam line isolation. Main steam line isolation fails and all MSIV's remain open throughout the remainder of the scenario. 22 Charging Pump fails to start on SEC actuation, requiring the crew to reset 2C SEC. While the 2C SEC is being reset, 2A 4KV Vital Bus trips and locks out on electrical fault (eliminating 21 CS Pump and 21 CFCU). The steam leak will be enlarged to break-size while the crew is responding in TRIP-1. Containment Spray and Phase B isolation fail to auto actuate, requiring the RO to manually initiate Containment Spray and Phase B isolation. The crew must manually start 22 CS Pump after manual spray is initiated. In FRCE-1, the crew should recognize insufficient SW flow to 22 and 24 CFCU's and dispatch an operator to fail open the respective SW223's (flow control valves).

The Lead Evaluator can terminate the scenario anytime after the crew transitions back from FRCE-1 to LOSC-2, Multiple SG Depressurization, and the SRNIS has been energized manually.

IV. INITIAL CONDITIONS

____ IC-184, on CD

MALFUNCTIONS:

SELF-		Description	Delay	Ramp	Trigger	Severity
____	1.	CV0185B: 22 CCP fails to start on SEC				
____	2.	MS0092E: 21MS167 fails OPEN				
____	3.	MS0092F: 22MS167 fails OPEN				
____	4.	MS0092G: 23MS167 fails OPEN				
____	5.	MS0092H: 24MS167 fails OPEN				
____	6.	RP0277A: Auto Containment Spray fails to actuate from Train A				
____	7.	RP0277B: Auto Containment Spray fails to actuate from Train B				
____	8.	RP0276A: Auto Phase B fails to actuate from Train A				
____	9.	RP0276B: Auto Phase B fails to actuate from Train B				
____	10.	PR0018A: 2PR1 leak	2 mins		1	0-5E04
____	11.	RC0015A: 21 Tcold RTD fails HI			2	630
____	12.	MS0247D: MS leak in CNTMT	20 mins		3	0-85E04
____	13.	MS0090D: MSLB in CNTMT			4	
____	14.	EL0144: Loss of 2B 4KV Vital Bus			5	
____	15.	VL0570: 22SW223 fails to position			6	37%
____	16.	VL0572: 24SW223 fails to position			6	42%

REMOTES:

SELF-CHECK		Description	Delay	Ramp	Trigger	Condition
____	1.	SJ17D: 22 SI Pump Control Power				OFF
____	2.	SJ18D: 22 SIP Brkr racked out				Tagged

OVERRIDES:

SELF-		Description	Delay	Ramp	Trigger	Action
____	1.	NONE				

TAGGED EQUIPMENT:

SELF-		Description
____	1.	RH1 and RH2 (C/T)
____	2.	VC 1-4 (C/T)
____	3.	RH 18's (C/T)
____	4.	RCPs (SELF CHECK)
____	5.	RT (SELF CHECK)
____	6.	MS 167s (SELF CHECK)
____	7.	500 KV SWYD (SELF CHECK)
____	8.	SGFP TRIP (SELF CHECK)
____	9.	22 ABV Supply Fan (C/T)
____	10.	23 Charging Pump (C/T)
____	11.	22 SI Pump

OTHER CONDITIONS:

		Description
____	1.	Place plastic cover on 22 SI Pump

V. SEQUENCE OF EVENTS

A. State shift job assignments:

B. Hold a shift briefing, detailing instruction to the shift: (provide crew members a copy of the shift turnover sheet)

C. Inform the crew "The simulator is running. You may commence panel walkdowns at this time. OS please inform me when your crew is ready to assume the shift".

D. Allow sufficient time for panel walk-downs. When informed by the OS that the crew is ready to assume the shift, ensure the simulator is cleared of unauthorized personnel.

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
1. Power Ascension		
	CRS briefs crew on reactivity plan supplied from Reactor Engineering and establishes rate of power reduction	
	CREW notifies the Systems Operator and the Condensate Polishing Operator	
	PO raises Turbine load: • Initiates monitoring Main Turbine Data display points on the Plant Computer • Removes Main Turbine Valve Position Limiter IAW SO.TRB-001 • Uses Rate Thumbwheel, REF▲ and GO pushbuttons to attain desired load	
	RO initiates boron dilution	
Initiate the next event (RT-0) on cue from the Lead Evaluator	**RO** maintains T_{AVG}/T_{REF} and AFD within the target band using Auto Rod motion and dilution	
RT-0: PR1 Develops a Leak **MALF PR0018A, 50000 lbm/hr, 2 min ramp**	**CREW** responds to any or all: • PZR pressure lowering • Heaters energizing • Rising tailpipe temperature • OHA E-28	
NOTE: Crew may enter S2.OP-AB.RC-0001 and then transition to S2.OP-AB.PZR-0001	**CRS** enters AB.PZR-0001 and **CREW** closes 2PR6&7. Crew sequentially opens 2PR6&7 to identify which PORV is leaking	
	All PZR heaters will be energized in Auto to recover pressure	
NOTE: DNB TS 3.2.5 applies if RCS pressure lowers <2200 psia	**CRS** refers to Tech Specs, declare PR1 inoperable IAW 3.4.5.a and directs RO to close 2PR6	
Initiate next event (RT-2) on cue from the Lead Evaluator	**RO** closes 2PR6	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
RT-2 Loop 21 Tc RTD fails high **RC015A Severity = 630**	**RO** responds to: • Console alarms • Rods stepping in **RO** determines no Turbine Runback in progress **RO** gains CRS concurrence and places Rod Control in MANUAL **CRS** enters AB.ROD-3 **RO** monitors and controls Tavg **CRS** verifies rod motion was in the inward direction **RO** verifies a NIS channel has not failed **RO** stops RCS dilution **RO** identifies Loop 21 Tavg failed high **RO** returns PZR level to program by adjusting Master Flow Controller in MANUAL **RO** defeats failed Tavg input by depressing the 21 Loop Deviation Defeat PB **RO** selects Tavg Recorder to a valid loop **RO** defeats failed ΔT input to RIL Comparator by depressing the Deviation Defeat PB for 21 Loop **RO** selects the ΔT Recorder to a valid loop **RO** returns Master Flow Controller to AUTO	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE		
Evaluator/Instructor Activity	**Expected Plant/Student Response**	**Comments**
	CRS verifies rods are above the RIL **RO** restores Rod Control to AUTO	
Initiate next event (RT-3) after TSAS determination and on cue from the Lead Evaluator	**CRS/STA** refers to TS. • 3.3.1.1 Action 6 (OTΔT) • 3.3.2.1 Action 19	
RT-3: Main Steam Leak in CNTMT **MALF: MS0247D; SEV=85E04 RAMP=20 mins,**	**CREW** diagnoses a steam leak based on rising containment pressure w/o radiation **CRS** enters AB.STM-0001. CRS may enter T.S. 3.6.1.4 for high Containment Pressure	
SIM OP: Please note that RT-4, RT-5 and RT-6 will be initiated out of sequence	**CRS** initiates Attachment 1 of AB.STM-1: • Monitors for reactor power rise • RCS cooldown **PO** verifies proper operation of MS10s and Steam Dumps	
NOTE: The progress of the scenario may be such that the CRS orders a Rx Trip/SI/MSLI before commencing a shutdown	**CRS** determines a shutdown is required	
Initiate RT-6 when SI is initiated **RT-6: 22&24SW223 fail to properly position** **MALF: VL0570; SEV=37%** **MALF: VL0572; SEV=42%**	**CREW** determines Rx Trip/SI/MSLI required based on unisolable leak inside containment **CRS** orders a MANUAL Rx Trip/SI and MSLI **RO** initiates MANUAL Rx Trip and SI **RO** attempts MSLI	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
NOTE: After TRIP-1 IA's completed, CRS may order PO to attempt fast and slow closure of the MS167's	**RO** performs IAs of TRIP-1: • Trip Turbine • Verify Vital AC busses energized • SI actuated	
	RO/PO report 2C SEC loading not complete	
	PO blocks 2C SEC at RP-1 Panel	
When the PO resets 2C SEC, initiate RT-5. **RT-5: Loss of 2A Vital Bus** **MALF: EL0144**	**PO** resets 2C SEC at EDG Bezel	
	CREW may send NEO to check 2A Bus	
	RO starts 22 CCP	
	RO closes 21 and 22CA330	
	RO reports CNTMT Press <15 PSIG	
NOTE: CREW should determine all SGs faulted and NOT isolate AFW to any SG	**CREW** continues actions of TRIP-1	
Initiate RT-4 after PZR PORV STATUS steps **RT-4: Steam Line Rupture** **MALF: MS0090D**		
	CRS should maintain 2PR6 closed at PORV Status block of steps	
	RO closes CV139 and 140 when RCS pressure <1500 and BIT flow established	
NOTE: This CAS criteria applies in TRIP-1, not LOSC-1 or 2. The RCP's will be stopped in FRCE-1	**RO** stops all RCP's when RCS lowers <1350 with ECCS flow established	

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
NOTE: Crew may take action initiate Containment Spray ond to start 22 CS Pump at any time after the AUTO start setpoint is exceeded	**RO** determines all SG pressures lowering in an uncontrolled manner	
	CRS transitions to LOSC-1	
	PO reports all SG pressures dropping in an uncontrolled manner	
	CRS transitions to LOSC-2	
NOTE: Dependent on crew response time during the scenario, this can occur anytime after FR transition is permissible	**CRS** transitions to FRCE-1	
	RO verifies 2VC1-6 closed	
CT#1: Establish CS flow before exiting FRCE-1 **SAT_____UNSAT_____**	**RO** starts 22 CS Pump and opens 22CS2 (CS Pump Disch Vlv)	
	RO must manually initiate Phase B Isolation	
	RO stops all RCP's	
	RO reports SW flow <2650 gpm to 22 and 24 CFCU's	
	CRS dispatches NEO's to fail 22 and 24SW223 open	
CT# 2: Reduce and maintain AFW flow at no less than 1E04 lbm/hr to each SG before exiting FRCE-1 **SAT_____ UNSAT_____**	**PO** reduces AFW to no less than 1E04 lbm/hr per SG	
NOTE: Crew must transition to FRHS-1 on Red Path and will transition back to FRCE-1 after first step of FRHS-1. Red Path due to operator action		

SCENARIO GUIDE SEQUENCE AND EXPECTED RESPONSE

Evaluator/Instructor Activity	Expected Plant/Student Response	Comments
The Lead Evaluator can terminate the scenario after stopping the RHR Pumps in LOSC-2	**CREW** returns to LOSC-1 **PO** reports all SG's depressurizing in an uncontrolled manner **CRS** notifies WCC/OSC to close MSIVs locally **CRS** transitions to LOSC-2 **PO** does not stop 23 AFW Pump **RO/PO** perform SI Reset actions: • Reset SI • Reset Phase A • Reset Phase B • Open 21&22CA330 • Reset 2B SEC **CRS/PO** verify no SGTR **RO** stops RHR Pumps	
ECG Classification – UNUSUAL EVENT - Loss of Containment Barrier 3.3.1a or 3.3.2.b or 3.3.4.a		

VI. SCENARIO REFERENCES

A. Alarm Response Procedures (Various)
B. Technical Specifications
C. Emergency Plan (ECG)
D. SC.OP-AP.ZZ-0102(Q), Use of Procedures
E. S2.OP-IO.ZZ-0004, Power Operation
F. S2.OP-AB.PZR-0001, Pressurizer Pressure Malfunction
G. S2.OP-AB.ROD-0003, Continuous Rod Motion
H. S2.OP-AB.STM-0001, Steam Leak
I. 2-EOP-TRIP-1, Reactor Trip of Safety Injection
J. 2-EOP-LOSC-1, Loss of Secondary Coolant
K. 2-EOP-LOSC-2, Multiple SG Depressurization
L. 2-EOP-FRCE-1, Response to Excessive Containment Pressure

TURNOVER SHEET

UNIT TWO PLANT STATUS

MODE: 1 **POWER:** 25% **RCS BORON:** 910 **MWe:** 210

SHUTDOWN SAFETY SYSTEM STATUS (5, 6 & DEFUELED):

NA

REACTIVITY PARAMETERS

Core Burnup: 10500 MWD/MTU

MOST LIMITING LCO AND DATE/TIME OF EXPIRATION:

3.5.2.a (22 SI Pump) – 60 hours remaining

EVOLUTIONS/PROCEDURES/SURVEILLANCES IN PROGRESS:

Raise power to 100% at 5%/hr

Reactor Engineering recommends total dilution of 15000 gallons to 100% power. Recommended dilution in 1000 gallon increments @ 20 gpm supplemented by rod withdrawal as necessary to maintain Tavg and AFD.

ABNORMAL PLANT CONFIGURATIONS: None

CONTROL ROOM:

Unit 1 and Hope Creek at 100% power.
No penalty minutes in the last 24 hrs.

PRIMARY: 22 SI Pump C/T for motor bearing replacement

SECONDARY:

Heating steam is aligned to unit 1.

RADWASTE:

No discharges in progress

CIRCULATING WATER/SERVICE WATER: None