Facility: PRAIRIE ISLAND Scenario No.: 1 Op-Test No.: PI-ILT-NRC-14

Examiners: _____ Operators: _____
_____ _____
_____ _____

Initial Conditions:

Reactor Power at 1 x 10^{-8} amps, Boron Concentration at 1369 ppm, RCS temperature at 547°F, RCS pressure at 2235 psig, Xenon at equilibrium, Bank D rods at 144 steps, Generator Power at 0 MW.

No equipment is out of service.

Turnover:

Raise reactor power to the point of adding heat.

Event No.	Malf. No.	Event Type*	Event Description
1		R (ATC) N (SRO)	RAISE POWER TO THE POAH
2		I (ATC, SRO) TS (SRO)	PRZR PRESSURE CHANNEL FAILS LOW (CONTROLLING CHANNEL)
3		C (ATC, SRO) TS (SRO)	22 GPM RCS LEAK INTO CONTAINMENT
4		M (ALL)	SMALL BREAK LOCA
5		C (BOP)	11 & 12 SI PUMPS FAIL TO AUTO START
6		C (BOP)	11 & 12 CC PUMPS FAIL TO AUTO START

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

Facility: PRAIRIE ISLAND Scenario No.: 2 Op-Test No.: PI-ILT-NRC-14

Examiners: _____ Operators: _____
_____ _____
_____ _____

Initial Conditions:

Reactor Power at 100%, Boron Concentration at 1299 ppm, RCS temperature at 560°F, RCS pressure at 2235 psig, Xenon at equilibrium, Bank D rods at 218 steps, Generator Power at 581 MW.

12 RHR Pump is out of service. T.S. LCO 3.5.2 Condition A was entered with 48 hours remaining. D1, 11 TD AFW Pump, 11 RHR Pump, 11 SI Pump, 11 CC Pump, and 12 CLW Pump are PROTECTED. BKR 16-10 is out of service.

Turnover:

Place a 2nd Letdown Orifice in service in preparation of SP 1047, Control Rod Quarterly Exercise.

Event No.	Malf. No.	Event Type*	Event Description
1		N (BOP)	PLACE 2ND LETDOWN ORIFICE IN SERVICE
2		TS (SRO)	CONTAINMENT PRESSURE CHANNEL FAILS HIGH
3		I (ATC, SRO) TS (SRO)	PRESSURIZER LEVEL FAILS HIGH
4		C (BOP, SRO)	TURBINE MALFUNCTION (10 MW LOAD CYCLING)
5		R (ATC) N (SRO)	RAPID DOWNPOWER (100% TO 95%)
6		M (ALL)	LARGE BREAK LOCA
7		C (BOP)	MAIN TURBINE FAILS TO AUTO TRIP
8		C (ATC)	BOTH SAFEGUARD TRAINS FAIL TO AUTO ACTUATE
9		C (BOP, SRO)	11 & 12 AFW PUMPS FAIL TO AUTO START

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

Facility: PRAIRIE ISLAND Scenario No.: 3 Op-Test No.: PI-ILT-NRC-14

Examiners: _____ Operators: _____
_____ _____
_____ _____

Initial Conditions:

Reactor Power at 50%, Boron Concentration at 1482 ppm, RCS temperature at 556°F, RCS pressure at 2235 psig, Xenon at equilibrium, Bank D rods at 181 steps, Generator Power at 272 MW.

PT-485, Turbine First Stage Pressure, is failed HIGH. Rod Control is in MANUAL. T.S. LCO 3.3.1 Condition A and R entered. P7 was verified to be in required state for existing unit conditions. TRM 3.3.4 Condition A was entered. A Work Request was initiated to repair PT-485. 123 Air Compressor is out of service. 13 Charging Pump Suction Stabilizer PM is complete are ready to be re-started.

Turnover:

Restore RCS Average Coolant Temperature to program temperature.

Swap charging pumps to 11 and 13 running and 12 is secured per 1C12.1.

Event No.	Malf. No.	Event Type*	Event Description
1		R (ATC) N (SRO)	RESTORE TAVE TO TREF
2		N (BOP)	SWAP CHARGING PUMPS
3		TS (SRO)	11 SI PUMP PLACED IN LOCAL
4		I (BOP, SRO) TS (SRO)	N43 PR NUCLEAR INSTRUMENT FAILS HIGH
5		C (ATC)	PRESSURIZER SPRAY VALVE DRIFTS OPEN
6		C (ATC, SRO)	LOOP A RCS LOSS OF FLOW & REACTOR FAILS TO AUTOMATICALLY TRIP
7		M (ALL)	FAULT IN 12 SG

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

Facility: PRAIRIE ISLAND Scenario No.: 4 Op-Test No.: PI-ILT-NRC-14

Examiners: _____ Operators: _____
_____ _____
_____ _____

Initial Conditions:

Reactor Power at 50%, Boron Concentration at 1480 ppm, RCS temperature at 553°F, RCS pressure at 2235 psig, Xenon at equilibrium, Bank D rods at 175 steps, Generator Power at 265 MW.

13 Charging Pump is out of service. Two 40 GPM letdown orifices are in service. Pressurizer heaters are on. 11 and 12 Condensate Pumps are running. 11 and 12 Main Feed Pumps are running. 11 MFP recirculation valve is still open. 11 and 12 HDT Pumps are running.

Turnover:

Alternate CFCUs and discharge dampers such that 11 and 13 CFCUs are running in slow to the dome and 12 and 14 CFCUs are running in fast to support/gap.

When directed by the Shift Manager, perform a load increase from 50% to 60%.

Event No.	Malf. No.	Event Type*	Event Description
1		N (BOP)	ALTERNATE CONTAINMENT FAN COIL UNITS AND DISCHARGE DAMPERS
2		I (BOP, SRO) TS (SRO)	11 SG PRESS CHANNEL FAILS HIGH CAUSING 11 SG PORV TO OPEN
3		R (ATC) N (SRO)	UNIT 1 LOAD INCREASE FROM 50% TO 60%
4		C (ATC, SRO)	DROPPED ROD (B-8) AND REACTOR FAILS TO AUTOMATICALLY TRIP
5		C (BOP)	TURBINE FAILS TO AUTOMATICALLY TRIP
6		M (ALL)	LOSS OF ALL AC (OCCURS 10 SECS AFTER TURB TRIP)
7		C (ATC, SRO)	11 TD AFW PUMP FAILS TO AUTO START

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

Facility: PRAIRIE ISLAND Scenario No.: 5 Op-Test No.: PI-ILT-NRC-14

Examiners: _____ Operators: _____
_____ _____
_____ _____

Initial Conditions:

Reactor Power at 100%, Boron Concentration at 853 ppm, RCS temperature at 560°F, RCS pressure at 2235 psig, Xenon at equilibrium, Bank D rods at 218 steps, Generator Power at 581 MW.

11 SI Pump is out of service. T.S. LCO 3.5.2 Condition A was entered with 48 hours remaining. D2, 12 MD AFW Pump, 12 RHR Pump, 12 SI Pump, 12 CC Pump, and 22 CLW Pump are PROTECTED. PT-485, Turbine First Stage Pressure, is failed LOW. Rod Control is in MANUAL. T.S. LCO 3.3.1 Condition A and R entered. P7 was verified to be in required state for existing unit conditions. TRM 3.3.4 Condition A was entered. A Work Request was initiated to repair PT-485. B/S 1PC-485A is tripped. Bus 15 and 16 are powered from CT11. A dedicated operator is monitoring phase currents at the G-Panel.

Turnover:

Transfer power on Bus 15 to 1RY after turnover is complete.

Event No.	Malf. No.	Event Type*	Event Description
1		N (BOP)	TRANSFER POWER ON BUS 15 FROM CT11 TO 1RY
2		I (ATC, SRO) TS (SRO)	ROD E-3 POSITION INDICATION FAILS LOW
3		I (ATC, SRO) TS (SRO)	RCS THOT CHANNEL FAILS HIGH
4		C (BOP, SRO)	LOSS OF BUS DUCT COOLING
5		R (ATC) N (SRO)	RAPID DOWNPOWER (100% to 50%)
6		M (ALL)	12 SG TUBE RUPTURE
7		C (BOP)	SI TO CHILLED WATER SIGNAL FAILURE

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