Scenario Outline

Form ES-D-1

Facility : PBNP Scenario No.: <u>1</u> OP-Test No.: <u>2000-1</u>								
Examiners: Operators:								
Initial Conditions: Unit 1 @ 100% Power, MOL, Equilibrium Xe. Unit 2 @ 100% Power, BOL.								
Today is Sunday (present clock time is real time). Normal shift complement with exception of 3 rd								
<u>SKU.</u>								
Turnove	er: G-01 i	s out of se	rvice for annual maintenance. It was taken OOS 2 days ago, and is					
expected	d to be ret	turned to s	ervice in 3 days.					
<u>G-02 is</u>	aligned to	o 1AO5 an	<u>d 2AO5 IAW OI-35A.</u>					
A Sever	e Thunde	rstorm Wa	atch is in effect over the next 4 hours.					
Event	Malf.	Event	Event					
No.	No.	Type*	Description					
1		I/	Controlling Pressurizer Pressure Channel Fails High.					
	· · · · · · · · · · · · · · · · · · ·	(RO)						
2		M/	Steam Generator Tube Leak ("B" S/G) Develops.					
2		(ALL)						
3		R/(RO)	Perform Technical Specification required down-power.					
1		(ALL)	Steam Flow Transmitter Fails High ("B" S/G)					
-		(BOP)	Scan Flow Hansingter Paris Fign (D 5/G).					
5		M/	Steam Line Break outside Containment upstream of "B" S/G MSIV.					
-		(ALL)						
6		M/	Steam Generator Tube Leak increases into Design Basis Tube					
		(ALL)	Rupture post trip ("B" S/G)					
7		C/	Failure of Train "A" SI to AUTO actuate requiring manual actuation.					
		(RO)						
8		C/	"B" RHR Pump (1P-10B) Fails to Auto Start.					
		(RO)						
9		C	P-32B, Service Water Pump Fails to AUTO Start					
		(ROL)						
	T) 1							

NUREG-1021, Revision 8

Scenario Outline

Form ES-D-1

Facility	<u>: PBNP</u>	_ :	Scenario No.: $\underline{2}$ OP-Test No.: $\underline{2000-1}$					
Examin	ers:		Operators:					
Initial Conditions: <u>Unit 1 @ 28% Power, BOL, Equilibrium Xe. Unit 2 @ 100% Power, BOL.</u> <u>Today is Sunday (present clock time is real time). Normal shift complement with exception of 3rd SRO.</u>								
Turnous	Turnerren OD 10. "I en Demente Nermel Demen Orgentien" er state i demente data							
Chemist	Turnover: <u>OP-IC</u> , "Low Power to Normal Power Operation" completed through step 4.117.							
The DS	S directs 1	eactor pov	ver raised to 47% upon turnover.					
I & C ha	as VCT L	evel Trans	mitter (LT-141) de-energized for repairs.					
G-01 is	out of ser	vice for ar	nual maintenance. It was taken OOS 2 days ago, and is expected to be					
returned	to servic	e in 3 days	s. G-02 is aligned to 1AO5 and 2AO5 IAW OI-35A.					
A Sever	<u>e Thunde</u>	rstorm Wa	tch is in effect for the next 4 hours.					
								
Event	Malf.	Event	Event					
No.	No.	Type*	Description					
1		R/(RO)	Perform a normal up-power IAW OP-1C.					
		N/						
		(ALL)						
2		I/	Thot Instrument fails High.					
		(RO)						
3		I/	Controlling Steam Generator Pressure Transmitter Fails High.					
		(BOP)						
4		C/	Drop two control rods (not simultaneously).					
-		(RO)						
5			Anticipated Transient Without Scram (ATWS).					
((ALL)	DODY and a local to be an and the instance of the second s					
D			POR V opens and Fails to Reseat (can be manually isolated).					
7		$(\mathbf{K}\mathbf{U})$	1919524 Epile to Open ("A" Train DID)					
/			151-652A raits to Open (A Train Krik).					
8			1CV-313 Fails to Shut (CI Valve)					
0		BOP						
9		M/	LOCA develops outside Containment					
, ,		(ALL)	Insie					
* (N	J)ormal,	Reacti	vity, (I)nstrument, (C)omponent, (M)ajor					

NUREG-1021, Revision 8

Scenario Outline

Form ES-D-1

Examin	ers:		Operators:
Initial C	Conditions	s: <u>Unit 1 @</u>	100% Power, MOL, Equilibrium Xe. Unit 2 @ 100% Power, BOL.
Today 1	<u>s Sunday</u>	(present c	lock time is real time). Normal shift complement with exception of 3"
<u>3RU.</u>			
Turnove	er: G-01 i	s out of se	rvice for annual maintenance. It was taken OOS 2 days ago, and is
expecte	d to be re	turned to s	service in 3 days. G-02 is aligned to 1AO5 and 2AO5 IAW OI-35A.
A Sever	re Thunde	erstorm Wa	atch is in effect for the next 4 hours.
The off	-going DS	SS received	d a request from the System Dispatcher to reduce power to 60 % over
	-going D.		a a request nom me s jotem 2 topatemer to requee poner to of or
the next	t hour due	to grid in	stabilities.
the next	t hour due	to grid in	stabilities.
the next Event	hour due Malf.	to grid in: Event	Event
the next Event No.	Malf.	to grid in: Event Type*	Event Description
Event No.	Malf. No.	Event Type* R(RO)	Event Description Perform a down-power IAW AOP-17A.
Event No.	Malf. No.	Event Type* R(RO) N/	Event Description Perform a down-power IAW AOP-17A.
Event No.	Malf. No.	Event Type* R(RO) N/ (ALL)	Event Description Perform a down-power IAW AOP-17A.
Event No.	Malf. No.	Event Type* R(RO) N/ (ALL) I/(RO/	Event Description Perform a down-power IAW AOP-17A. First Stage Turbine Impulse Pressure Fails High.
Event No. 1	Malf. No.	Event Type* R(RO) N/ (ALL) I/(RO/ BOP)	stabilities. Event Description Perform a down-power IAW AOP-17A. First Stage Turbine Impulse Pressure Fails High.
Event No. 1 2	Malf. No.	Event Type* R(RO) N/ (ALL) I/(RO/ BOP) C/I/	stabilities. Event Description Perform a down-power IAW AOP-17A. First Stage Turbine Impulse Pressure Fails High. Running CCW Pump Shaft seizure with failure of standby pump to
Event No. 1 2 3	Malf. No.	Event Type* R(RO) N/ (ALL) I/(RO/ BOP) C/I/ (BOP)	stabilities. Event Description Perform a down-power IAW AOP-17A. First Stage Turbine Impulse Pressure Fails High. Running CCW Pump Shaft seizure with failure of standby pump to auto start.
Event No. 1 2 3 4	Malf. No.	Event Type* R(RO) N/ (ALL) I/(RO/ BOP) C/I/ (BOP) C/	stabilities. Event Description Perform a down-power IAW AOP-17A. First Stage Turbine Impulse Pressure Fails High. Running CCW Pump Shaft seizure with failure of standby pump to auto start. "1A" MFP Oil Leak(1P-28A) develops and worsens.
Event No. 1 2 3 4	Malf. No.	Event Type* R(RO) N/ (ALL) I/(RO/ BOP) C/I/ (BOP) C/ (ALL)	stabilities. Event Description Perform a down-power IAW AOP-17A. First Stage Turbine Impulse Pressure Fails High. Running CCW Pump Shaft seizure with failure of standby pump to auto start. "1A" MFP Oil Leak(1P-28A) develops and worsens.
Event No. 1 2 3 4 5	Malf. No.	Event Type* R(RO) N/ (ALL) I/(RO/ BOP) C/I/ (BOP) C/ (ALL) C/	stabilities. Event Description Perform a down-power IAW AOP-17A. First Stage Turbine Impulse Pressure Fails High. Running CCW Pump Shaft seizure with failure of standby pump to auto start. "1A" MFP Oil Leak(1P-28A) develops and worsens. "1B" MFP trips on Overload which results in a reactor trip.
Event No. 1 2 3 4	Malf. No.	Event Type* R(RO) N/ (ALL) I/(RO/ BOP) C/I/ (BOP) C/ (ALL) C/ (BOP)	stabilities. Event Description Perform a down-power IAW AOP-17A. First Stage Turbine Impulse Pressure Fails High. Running CCW Pump Shaft seizure with failure of standby pump to auto start. "1A" MFP Oil Leak(1P-28A) develops and worsens. "1B" MFP trips on Overload which results in a reactor trip.
Event No. 1 2 $\overline{5}$	Malf. No.	Event Type* R(RO) N/ (ALL) I/(RO/ BOP) C/I/ (BOP) C/ (ALL) C/ (BOP) C/ (ALL) C/ (BOP) M/	Stabilities. Event Description Perform a down-power IAW AOP-17A. First Stage Turbine Impulse Pressure Fails High. Running CCW Pump Shaft seizure with failure of standby pump to auto start. "1A" MFP Oil Leak(1P-28A) develops and worsens. "1B" MFP trips on Overload which results in a reactor trip. Upon fast bus transfer, a Loss of Off-Site Power and On-Site Power

NUREG-1021, Revision 8

Scenario Outline

Form ES-D-1

Facility : PBNP Scenario No.: <u>4</u> OP-Test No.: <u>2000-1</u>								
Examine	ers:		Operators:					
Initial Conditions: Unit 1 @ 75 % Power, MOL, Xenon has peaked following downpower. Unit 2								
@ 100% Power, BOL. Today is Sunday (present clock time is real time). Normal shift								
complet	complement with exception of 3 SRO.							
Turnove	er: <u>Unit 1</u>	was reduc	ed to 75% 5 hours ago for a maintenance evaluation of a lube oil leak					
<u>on 1P-28</u>	on 1P-28A, Main Feedwater Pump.							
<u>Mainten</u>	Maintenance has just completed their evaluation and determined that the Main Feedwater Pump							
must be	removed	from serv	ice.					
The obje	ective of t	the shift is	to reduce power to 55% and secure 1P-28A.					
<u>OP-3A i</u>	s the prod	cedure in e	effect and has been completed through step 4.6.					
<u>P-38B, I</u>	Electric A	uxiliary F	eedwater Pump has been OOS for two days to repair recirc line cracks.					
	r	I						
Event	Malf.	Event	Event					
No.	No.	Type*	Description					
1		I/	HC-135, Letdown Line Pressure Controller Fails High.					
		(RO)						
2		N/	Place Excess Letdown in service.					
		(RO)						
3		C/	Loss of Condenser Vacuum					
		(ALL)						
4		R/	Rapid Plant Down-Power IAW AOP-17A due to vacuum loss.					
		(RO)						
		N						
5		(ALL)	Condenser Vessure de modes te reseter trin eriterie					
3			Condenser vacuum degrades to reactor unp criteria.					
6		(ALL)	Main Turbing Fails to ALITO & MANUALLY Trip					
0			Wiam Futome Fails to AUTO & WIAMUALLT THP.					
7		C/	1P-29 Turbine Driven Auxiliary Feedwater Pump trips on					
,		(BOP)	overspeed.					
8		C/	P-38A. Electric Driven Auxiliary Feedwater Pump Discharge Valve					
~		(BOP)	Controller Fails.					
9		M/	Loss of Heat Sink that is recoverable using Main Feedwater.					
		(ALL)						
* (N	J)ormal,	Reacti	vity, (I)nstrument, (C)omponent, (M)ajor					