

Facility:	Turkey Point	Scenario No.:	1	Op Test No.:	2007-301
Examiners:	_____	Candidates:	_____	US	
	_____		_____	RO	
	_____		_____	BOP	

**Initial Conditions:** Mode 1, 75% Power, MOL, Awaiting permission from plant management to increase power back to 100%. 3-GOP-301 in use complete through step 5.96 for return to 100% power following a turbine valve test.

**Turnover:** Equipment OOS: 3B EDG due to failed fuel pump (OOS 2 days; next 0-OSP-023.3 Att 1 & 9 in 4 hrs); B AFW Pump due to bearing failure (OOS 4 hrs; ETR 24 hrs; both trains verified operable); 3B CSP due to failed IST - low discharge pressure (OOS 12 hr; ETR 36 hr)

Perform 3C ICWP isolation valve cycling test per step 7.1.3 of 3-OSP-019.3. Steps 7.1.1 & 7.1.2 for 3A and 3B ICWP are not scheduled for this shift.

Known tube leak in 3A S/G (2 gpd) – unchanged for last week. Chemistry samples are being taken per 3-ONOP-071.2, Attachment 1. The current sample, just completed indicates no significant change in leak rate. MOV-3-1403 remains open at management direction due to small size and stability of tube leak rate.

Event No.		Event Type*	Event Description
1		(N) SRO/BOP	3C ICWP discharge isolation valve cycling test per 3-OSP-019.3 step 7.1.3.
2	TFN1P4AH = T	(I) RO (TS,I) SRO	Power range NI channel N-44 upper detector fails high. The crew responds per 3-ONOP-059.8.
3	TFS1ML3L = T	See event 4a below	PT-3-1604 fails low. The crew responds per 3-ARP-097.CR for annunciator D-7/4.
4	TFE2Z52S = T	(C) BOP (C, TS) SRO	Loss of 3C 4kV bus. The crew responds per 3-ONOP-004.4. TS are evaluated for loss of the A SSGFWP.
4a		(R) SRO/RO (I) BOP*	Automatic runback fails due to PT-3-1604 failure and requires manual action to reduce power < 60 % to avoid reactor trip on s/g lo-lo level. The crew responds per 3-ONOP-089.
5	TVFACN3 = 0.1 TFV98M = T TCF1D09M = F TFL2XASE = T TFL2XBSE = T	(M) ALL (C) RO/SRO	Once reactor power stabilized < 60% power, a 3C SG feed break occurs inside containment. A manual reactor trip is required before any SG level drops < 10% since the automatic reactor trip is failed. 3-EOP-E-0 is performed. The MOV-3-1409 breaker trips & FCV-3-498 fails to close leaving an uncontrolled feed path to 3C SG if 3A SGFP started.
6	TAFXSRPC = 6300.0 TCF5MTC = T	(M) ALL	C AFWP trips on overspeed prematurely at 6300 RPM (from setup). The trip can not be reset. B AFWP is OOS. A AFWP starts, but runs out of steam pressure from the 3C feed line fault. Efforts to realign A AFWP to train 2 steam are prevented by AFSS-3-007 stuck closed. SSGFW can not be used due to loss of 3C 4kV bus and a dead battery on B SSGFWP. The crew transitions to 3-EOP-FR-H.1 when AFW flow < 345 gpm and is eventually required to initiate feed & bleed since all SGs < 32% narrow range with adverse containment conditions.

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

\* - BOP action to either manually close CV-3-2011 in event 3 or manually reduce load in event 4a due to automatic turbine runback failure satisfies the BOP PT-3-1604 instrument failure manipulation.

Facility:	Turkey Point	Scenario No.:	2	Op Test No.:	2007-301
Examiners:	_____	Candidates:	_____	US	
	_____		_____	RO	
	_____		_____	BOP	

**Initial Conditions:** Mode 1, 50% Power, MOL. Power on hold at 50% following inadvertent trip of 3B SGFP while investigation in progress.

**Turnover:** Equipment OOS: 3B EDG due to failed fuel pump (OOS 2 days; next 0-OSP-023.3 Att 1 & 9 in 4 hrs); B AFW Pump due to bearing failure (OOS 4 hrs; ETR 24 hrs; both trains verified operable); 3B CSP due to failed IST - low discharge pressure (OOS 12 hr; ETR 36 hr)

Need to swap 3D 4kV bus power supply to 3A 4kV bus per 3-OP-005 section 7.4 after shift turnover to support possible emergent maintenance on 3A CCW pump (vibration increase last shift).

Known tube leak in 3A S/G (2 gpd) – unchanged for last week. Chemistry samples are being taken per 3-ONOP-071.2, Attachment 1. The current sample, just completed indicates no significant change in leak rate. MOV-3-1403 remains open at management direction due to small size and stability of tube leak rate.

Event No.		Event Type*	Event Description
1		(N) SRO/BOP	Swap 3D 4kV bus power supply to 3A 4kV bus per 3-OP-005 section 7.4.
2	TFS1MABL = T	(I) BOP (TS,I) SRO	First stage impulse pressure channel PT-3-446 fails low. The crew responds per 3-ONOP-028 to stop inward rod movement by taking rod control to manual and then 3-ONOP-049.1.
3	TFE6X06F = T TCE6D11C = T	(C) ALL	120VAC power panel 3P09 normal inverter fails. The auto swap to the CVT also fails leaving 3P09 deenergized. The crew responds per 3-ONOP-003.9. 3P09 is swapped over to the spare inverter per 3-ONOP-003.9 Attachment 1.
4	TFCMM2A4 = T TVHHSQA = 0.002	(C) ALL (TS) SRO	The 3A steam generator tube leak grows to 2 gpm. R-3-19 fails to respond. The crew responds per 3-ONOP-071.2
4a		(R) ALL	A fast load reduction from 50% power is initiated and performed per 3-ONOP-071.2
5	TVHHSQA = 0.4 TFSV33C = T	(M) ALL (C) SRO/BOP	The 3A steam generator tube leak grows from 2 gpm into a rupture. The reactor is tripped and 3-EOP-E-0 performed. MOV-3-1433 fails to close requiring manual isolation of MSIVs.
6	TFQ5A20A = T TAQ5LRSB = T TFP1S38S = T	(C) ALL	When transition is made from 3-EOP-E-0 to 3-EOP-E-3, the startup transformer locks out. 3A EDG starts but the output breaker does not automatically close, and 3-EOP-ECA-0.0 is entered. 3A EDG output breaker is manually closed and the crew transitions back to 3-EOP-E-3. Only 3A & 3D 4kV bus are now available from 3A EDG. 3-EOP-E-3 is performed to cooldown and depressurize the RCS to stop primary-secondary leak flow.

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

Facility: Turkey Point Scenario No.: 3 Op Test No.: 2007-301  
 Examiners: \_\_\_\_\_ Candidates: \_\_\_\_\_ US  
 \_\_\_\_\_ RO  
 \_\_\_\_\_ BOP

**Initial Conditions:** Mode 1, 75% Power, MOL, Awaiting permission from plant management to increase power back to 100%. 3-GOP-301 in use complete through step 5.96 for return to 100% power following a turbine valve test.

**Turnover:** Equipment OOS: 3B EDG due to failed fuel pump (OOS 2 days; next 0-OSP-023.3 Att 1 & 9 in 4 hrs); B AFW Pump due to bearing failure (OOS 4 hrs; ETR 24 hrs; both trains verified operable); 3B CSP due to failed IST - low discharge pressure (OOS 12 hr; ETR 36 hr)

Perform monthly surveillance on 3A ECC per 3-OSP-055.1 section 7.1 immediately after shift turnover. IST and remote valve position verification not required.

Known tube leak in 3A S/G (2 gpd) – unchanged for last week. Chemistry samples are being taken per 3-ONOP-071.2, Attachment 1. The current sample, just completed indicates no significant change in leak rate. MOV-3-1403 remains open at management direction due to small size and stability of tube leak rate.

Event No.		Event Type*	Event Description
1	TFKV905A = T	(N) BOP (N,TS) SRO	3A ECC monthly surveillance performed per 3-OSP-055.1 section 7.1. 3A ECC inlet valve CV-3-2905 fails to open and 3A ECC is declared OOS.
2	TFL1T8CH = T	(I) SRO/RO	TM-3-408C (Tavg input to rod control) fails high. Crew responds per 3-ONOP-028 and takes rods to manual to stop continuous inward rod movement.
3	TFE3D37A = T TFE3D38T = T	(C) RO/BOP (C,TS) SRO	Loss of 3H 480V LC. Also takes 3C charging pump, 3B ECC, 3B ECF & 3D NCC OOS. Requires starting another charging pump or securing the in service 60 gpm orifice. The crew responds per 3-ARP-097.CR for annunciators F-9/6, A-5/4, I-9/3 or I-9/4.
4	TAKPXA1=10.0 TAKPXA2 = 4.0	(C) SRO/BOP	3A1 Intake screen high Δp. Crew responds per 3-ONOP-011. 3A1 CWP is secured.
4a	TAKPXA2 = 1.0	(R) ALL	3A2 Intake screen high Δp. Fast load reduction per 3-ONOP-100 to 60% for the purpose of securing 3A2 CWP. Manual rod control must be used due to rod control Tavg failure.
5	TAHUVBSB=22 TAHUVBMB= 6	(M) ALL	3B RCP high vibration. The crew responds per 3-ONOP-041.1. Once vibration reaches the trip setpoint, the crew manually trips the reactor and immediate actions of 3-EOP-E-0 are performed.
6	TFE2Z51S = T TVHHCLB = 0.1 TFQ634AF = T	(M) ALL (cont'd from event 5) (C) ALL	When 3B RCP is tripped, 3B 4kV bus is lost and a large break LOCA occurs. An automatic SI occurs but train A sequencer fails. Train A ECCS equipment must be manually started. The crew completes 3-EOP-E-0 and transitions to applicable FRPs followed by 3-EOP-E-1.
6a			Once CSFSTs are monitored for implementation, if containment pressure is still above 20 psig, the crew immediately transitions to 3-EOP-FR-Z.1 if no higher red or orange path exists.
6b	TFM1D3AT = T	(C) SRO/RO	3-EOP-E-1 is entered after which 3A RHRP trips. Since neither RHRP is running, transition is made to 3-EOP-ECA-1.1. Measures are taken to minimize the loss of RWST inventory.

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