

TABLE 3.3.10
APPENDIX R ALTERNATIVE SHUTDOWN INSTRUMENTATION AND CONTROLS

<u>INSTRUMENT</u>	<u>READOUT LOCATION</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. CTG Unit 1 - Volts	H21-P623	1
2. CTG Unit 1 - Frequency		1
3. CTG Unit 1 - Watts		1
4. CTG Unit 1 - Vars		1
5. Condensate Storage Tank Level		1
6. Standby Feedwater Flow		1
7. Reactor Water Level		1
8. Reactor Pressure		1
9. Torus Water Temperature		1
10. Torus Water Level		1
11. Primary Containment Temperature		1

CONTROL CIRCUITS

SWITCH LOCATION

TRANSFER (T), CONTROL (C), CMC (CMC),
PUSHBUTTON (PB), SELECTOR (S)

(T) EF1 Supv. Control
(T) EF2 System Transfer

H21-P623

(C) Voltage Control
(C) Governor Control
(CMC) CTG 11 Unit 1 Control/Status
(C) 120 KV Pos GM Bkr Control
(C) 120 KV Pos GK Bkr Control
(C) 120 KV Pos GH Bkr Control
(C) 120 KV Pos GD Bkr Control

(CMC) CTG 11 Pos A2 Bkr Control
(CMC) 13.2 KV Pos A7 Outbuilding - TSC Fd Bkr Control
(CMC) 13.2 KV Pos A6 SS64 Alt Fd Bkr Control
(CMC) SS64 Pri Pos D Bkr Control
(CMC) SS66 Pri Pos C Bkr Control
(CMC) SS67 Pri Pos B Bkr Control
(CMC) Trans 1 Sec Pos A Bkr Control
(CMC) SBFW Pump A Bkr Control
(CMC) SBFW Pump B Bkr Control
(CMC) 4160V Pos V1 Bkr Control
(CMC) 4160V Pos V3 Bkr Control
(CMC) 4160V Pos W5 Bkr Control
(PB) SBFW Flow Control N21-F002
(PB) SBFW Flow Control N21-F003
(PB) SBFW Iso Valve N21-F001
(PB) SRV Line B B21-F013 G

TABLE 3.3.10 (Continued)
APPENDIX R ALTERNATIVE SHUTDOWN INSTRUMENTATION AND CONTROLS

CONTROL CIRCUITS

SWITCH LOCATION

(T) 4160V Pos C9 Tie Breaker Control (Cutoff Switch) H21-P624
 (T) 4160V Circuit Breaker Pos C10 Core Spray Pump C
 Control (Cut-off Switch)
 (T) 4160V Pos C5 Circuit Breaker Control
 (T) 4160V Pos C6 Circuit Breaker Control
 (T) 4160V Pos C8 Circuit Breaker Control
 (T) 4160V C11 Circuit Breaker Control

(CMC) Residual Heat Removal Pump C
 (CMC) 4160V Pos C6 Incoming Breaker Control
 (CMC) 4160V Diesel Gen Bus #12 EB Breaker Control
 (CMC) ESS Bus 72C Transf R1400S023A Primary Control

(T) 43S-5B Transfer Sw Vlv. E11-F004C H21-P625
 (T) 43S-6D Transfer Sw Vlv. E11-F048A
 (T) 43S-5A Transfer Sw Vlv. E11-F003A
 (T) 43S-5C Transfer Sw Vlv. E11-F006C
 (T) 43S-6A Transfer Sw Vlv. E11-F047A
 (T) 43S-6B Transfer Sw Vlv. E11-F068A
 (T) 43S-7A Transfer Sw Vlv. P44-F602A
 (T) 43S-4D Transfer Sw Vlv. P44-F607A
 (T) 43S-5D Transfer Sw Vlv. E11-F016A
 (T) 43S-9C Transfer Sw Fan T47-C002
 (T) 43S-4C Transfer Sw Vlv. P44-F606A
 (T) 43S-3C Transfer Sw Vlv. E11-F009
 (T) 43S-3A Transfer Sw Fan T41-B018
 (S) 43S-TW TR SW Valve T50-F412A, E41-F400

(PB) Suppr Pool to Pump C Vlv. E11-F004C
 (PB) RHR Heat Exch A Byp Vlv. E11-F048A
 (PB) RHR HX A Outlet E11-F003A
 (PB) SDC Suction to RHR Pump C E11-F006C
 (PB) RHR Heat Exch A Inl Vlv. E11-F047A
 (PB) RHR SW Control Vlv. E11-F068A
 (PB) EECW Div I HX Inlet Iso P44-F602A
 (PB) EECW to Drywl Isolation P44-F607A
 (PB) Contm Spray Otbd Iso Vlv. E11-F016A
 (CMC) Drywell Cooling Fan 2
 (PB) EECW from Drywell P44-F606A
 (PB) RHR Suction Cooling Inbd Vlv. E11-F009
 (S) Drywell Cooling Fan 2 (Low, High Speed)
 (CMC) RHR Emergency Equipment Cooler 1
 (PB) Torus Water Level Isolation Valve E41-F400
 (PB) Torus Water Level Isolation Valve T50-F412A

TABLE 3.3.10 (Continued)
APPENDIX R ALTERNATIVE SHUTDOWN INSTRUMENTATION AND CONTROLS

CONTROL CIRCUITS

SWITCH LOCATION

(T) 43S-5A Transfer Switch Vlv. Ell-F024A	H21-P626
(T) 43S-2A Transfer Switch Vlv. Ell-F028A	
(T) 43S-1AR Transfer Switch Fan T47-C001	
(T) 43S-3AR Transfer Switch Vlv. Ell-F004A	
(T) 42S-5DR Transfer Switch Vlv. Ell-F611A	
(PB) Suppr Pool Cooling Test Ell-F024A	H21-P626
(PB) Suppr Chmb Sp Otbd Iso Vlv. Ell-F028A	
(CMC) Drywell Cooling Fan 1	
(PB) Suppr Pool to Pump A Ell-F004A	
(S) Drywell Cooling Fan 1 (Low, High Speed)	
(PB) RHR Recirc. Otbd Bypass Ell50-F611A	
(T) 43S-1B Transfer Switch Vlv. B31-F031A	H21-P627
(T) 43S-2B Transfer Switch Vlv. Ell50-F010	
(T) 43S-2C Transfer Switch Vlv. Ell50-F015A	
(T) 43S-3A Transfer Switch Vlv. Ell50-F017A	
(PB) Recirc Pump A Disch Vlv. B31-F031A	
(PB) Crosstie Header Vlv. Ell-F010	
(PB) RHR to Recirc. Inbd Iso Vlv. Ell-F015A	
(PB) RHR Recirc Otddb Iso Vlv. Ell-F017A	
(T) 43S-4B Transfer Switch Vlv. P44-F616	H21-P628
(S) EECW from Drywell Inbd Iso P44-F616	
(PB) Dedicated Shutdown System	H11-P811