

APPENDIX D

COMMONALITY DIAGRAMS

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P PDR



1D615

125 VDC
NON CLASS 1E

TURBINE/
GENERATOR

- GENERATOR CLG WTR INST.
- A SYSTEM-TURB. TRIP & ALARM RELAYS
- THRUST BRG WEAR DETECTOR & LO BRG OIL PRESS.
- LO HYD. FLUID PRESS
- SHAFT PP DISCH. LO PRESS
- EXH. HOOD HIGH TEMP. GEN END TRIP
- UNDERVOLTAGE RELAY TO ALARM
- MSR DRN TK 1A HI LVL TRIP
- D SYSTEM-TURB. TRIP
- GEN SEQUENTIAL TRIP

RECIRC
FLOW CONTROL
SYSTEM


- TEMP INST TO "A" CONTROLLER
- RUNBACK SIGNAL INST- CIRC. WATER

REACTOR
FEEDWATER
CONTROL
SYSTEM

- RFT A TRIP

NOTES:

1D615 FED FROM 1D612 125VDC BUS.

NO		REVISIONS		OWN	CHK	APPV	DATE
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION COMMONALITY DIAGRAM-POWER SUPPLY- 1D615							
 ECLIS nuclear	SCALE	DRAWN	CHECKED	APPROVED	DATE		
	1/1	RJD	QAO	hik	12/1/89		
JOB NO		DRAWING NO			REV		
0160-004-671		0160-004-011			0		

ID625

125 VDC
NON CLASS IE

TURBINE/
GENERATOR

- GEN STATOR CLG WATER INST.

B SYSTEM - TURB. TRIP
& ALARM RELAYS

- THRUST BRG WEAR DETECTOR
& LO BRG OIL PRESS
- LO HYD. FLUID PRESS
- SHAFT PP DISCH LO PRESS
- EXH. HOOD HIGH TEMP
GEN END TRIP
- UNDERVOLTAGE RELAY
- MSR DRN TK IB HI LVL TRIP

E SYSTEM - TURB. TRIP

- GEN SEQUENTIAL TRIP

RECIRC
FLOW CONTROL
SYSTEM

- TEMP INST TO "B"
CONTROLLER

NEUTRON
MONITORING
SYSTEM
-TIP-



- TIP CONTROL

REACTOR
FEEDWATER
CONTROL
SYSTEM

- RFPT B TRIP

NOTES:

ID625 FED FROM ID622 125VDC BUS

REVISIONS		DATE	CHK	APP	DATE
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION COMMONALITY DIAGRAM-POWER SUPPLY-ID625					
 exls nuclear	SCALE:	DRAWN:	CHECKED:	APPROVED:	DATE:
		FJD	JAI	WAK	1/26/87
JOB NO.		DRAWING NO.		REV.	
0160-001-071		0160-001-012		0	

1D635

125 VDC
NON CLASS 1E

REACTOR
FEEDWATER
CONTROL
SYSTEM


- REACTOR WATER LEVEL-
INST C.
- FEEDWATER FLOW-
INST B.
- WIDE RANGE REACTOR LEVEL
- LEVEL B TRIP (R_x HIGH
WATER LEVEL)
- RFPT C TRIP

TURBINE/
GENERATOR

- C SYSTEM-TURB. TRIP
& ALARM UNIT
- THRUST BRG WEAR DETECTOR
& LO BRG OIL PRESS
- LO HYD. FLUID PRESS
- EXH HOOD HIGH TEMP
GEN. END TRIP
- UNDERVOLTAGE RELAY TO ALARM
- SHAFT PP DISCH LO PRESS
LEVEL B TRIP (R_x HIGH WATER LEVEL)

NOTES

1D635 FED FROM 1D632 125VDC BUS

NO	REVISIONS				DES	CHK	APPV	DATE
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION. COMMONALITY DIAGRAM-POWER SUPPLY-1D635								
 nuclear	SCALE:	DRAWN	CHECKED	APPROVED	DATE			
		FJD	JAT	WAL	12/21/51			
	JOB NO.		DRAWING NO		REV			
0160-001-671		0160-004-013		Q				

ID645

125 VDC
NON CLASS 1E

TURBINE/
GENERATOR


- LOAD REFERENCE LOGIC
- GENERATOR BREAKER TRIP
- VALVE TEST LOGIC
- LO VACUUM PRESS TRIP
- BYPASS LO VACUUM PRESS TRIP
- EHC DC INPUT POWER LOSS TRIP
- LEVEL 8 TRIP (HIGH R_x WATER LEVEL)
- OVERSPEED TRIP
- MOISTURE SEPARATOR HIGH LVL TRIP
- HIGH EXHAUST HOOD TEMP TRIP
- LOW SHAFT PP DISCHARGE PRESS TRIP
- THRUST BRG WEAR DET & LOW BRG OIL PRESS TRIP
- LOW HYDRAULIC PRESS TRIP
- MECHANICAL TRIP SOLENOID

REACTOR
FEEDWATER
CONTROL
SYSTEM

- REACTOR WATER LEVEL-
INST B
- LEVEL 8 TRIP (HIGH R_x
WATER LEVEL)

NOTES:

ID645 FED FROM ID642 125VDC BUS

REVISIONS		OWN	CHK	APPV	DATE
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION COMMONALITY DIAGRAM-POWER SUPPLY-ID645					
 nuclear	SCALE:	DRAWN	CHECKED	APPROVED	DATE
	1/1	KJD	PAI	WJK	12/21/81
JOB NO		DRAWING NO			REV
0160-004-871		0160-004-014			0

1Y218

120 VAC
NON CLASS 1E

RECIRC
FLOW CONTROL
SYSTEM

- FLOW CONTROL A
- FLOW CONTROL B
- MASTER CONTROLLER
- RUNBACK INST-
CONDENSATE PRESS
(L) A/B

REACTOR
MANUAL CONTROL
SYSTEM

- PWR DIST. PG10
SCRAM TEST PNL
- PWR DIST PG15
ROD POSN INFO
- PWR DIST PG59
ROD SEQUENCE CONTROL
- PWR DIST PG80-FULL
CORE DISPLAY, ROD
SELECT SWITCHES
- CRD HYD CONTROL
- 1ST STAGE TURBINE TRIP
INST.

NUCLEAR
PRESSURE
RELIEF
SYSTEM

TEMP MONITORING
(DOWNSTREAM
LEAKAGE)

TURBINE/
GENERATOR

LEVEL 8 TRIP
(HIGH R₂ WATER
LEVEL)

NEUTRON
MONITORING
SYSTEM
- TIP -

CONTROL INST.

REACTOR
WATER CLEANUP
SYSTEM


- DIFF. FLOW INST.

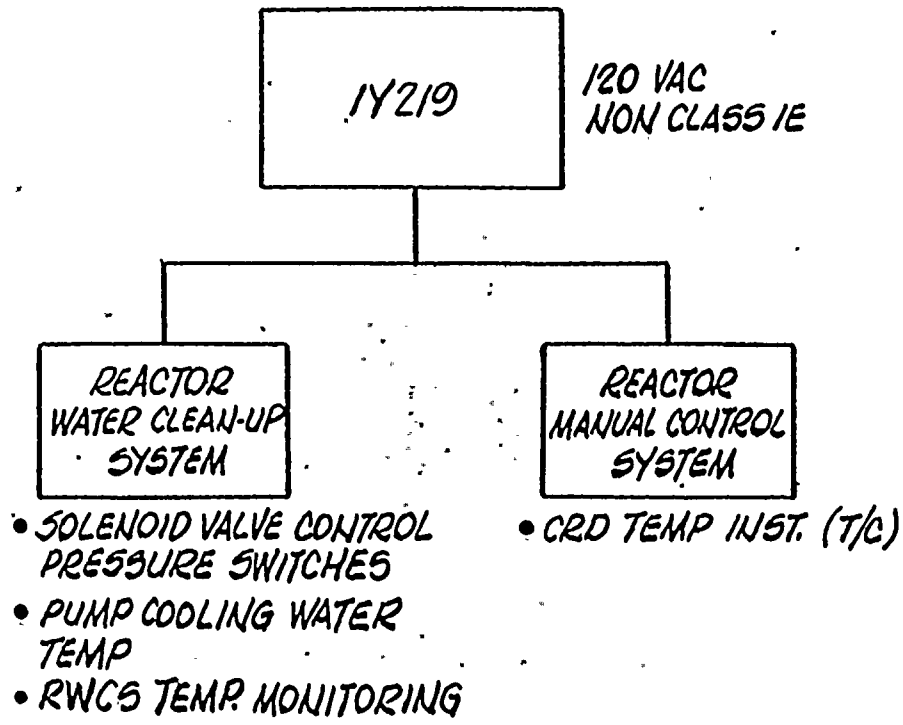
REACTOR
FEEDWATER
CONTROL
SYSTEM

- MIN TURBINE STM FLOW
- LOW FLOW CONTROLLER
- FEEDWATER PUMP CONTROL
- FEEDWATER PP TRIP INTLK/RECIRC
- FEEDWATER FLOW INST A, C
- REACTOR PRESS INST
- STM FLOW INST
- REACTOR WATER LEVEL INST(A)
- LEVEL 8 TRIP(HIGH R₂ WATER LEVEL)
- REACTOR WIDE RANGE LEVEL INST

NOTES:


1Y218 FED FROM 1B236 (DIV. I) ESS 480 V MCC (PREFERRED) AND
1B216 (DIV. I) ESS 480 V MCC (ALTERNATE)

NO	REVISIONS				DES	CHK	APP	DWG
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION COMMONALITY DIAGRAM-POWER SUPPLY-1Y218								
 nuclear	SCALE:	DRAWN	CHECKED	APPROVED	DATE			
	-1/-	FJD	JAT	ML	5/21/81			
	JOS MB	DESIGNED BY						
0160-001-671			0160-001-015			0		



NOTES:

1Y219 FED. FROM 1Y218 120 VAC DISTRIBUTION PANEL

NO		REVISIONS		OWN	CHE	APP	DATE
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION COMMONALITY DIAGRAM-POWER SUPPLY-1Y219							
 EPRI nuclear	SCALE:	DRAWN	CHECKED	APPROVED	DATE		
	-1-	FJD	JAT	WHL	12/21/81		
JOB NO		DRAWING NO				REV	
0160-004-071		0160-004-016				10	

1Y226

120 VAC
CLASS 1E

REACTOR
WATER CLEANUP
SYSTEM


- F/D INLET WATER TEMP

NUCLEAR
PRESSURE
RELIEF
SYSTEM

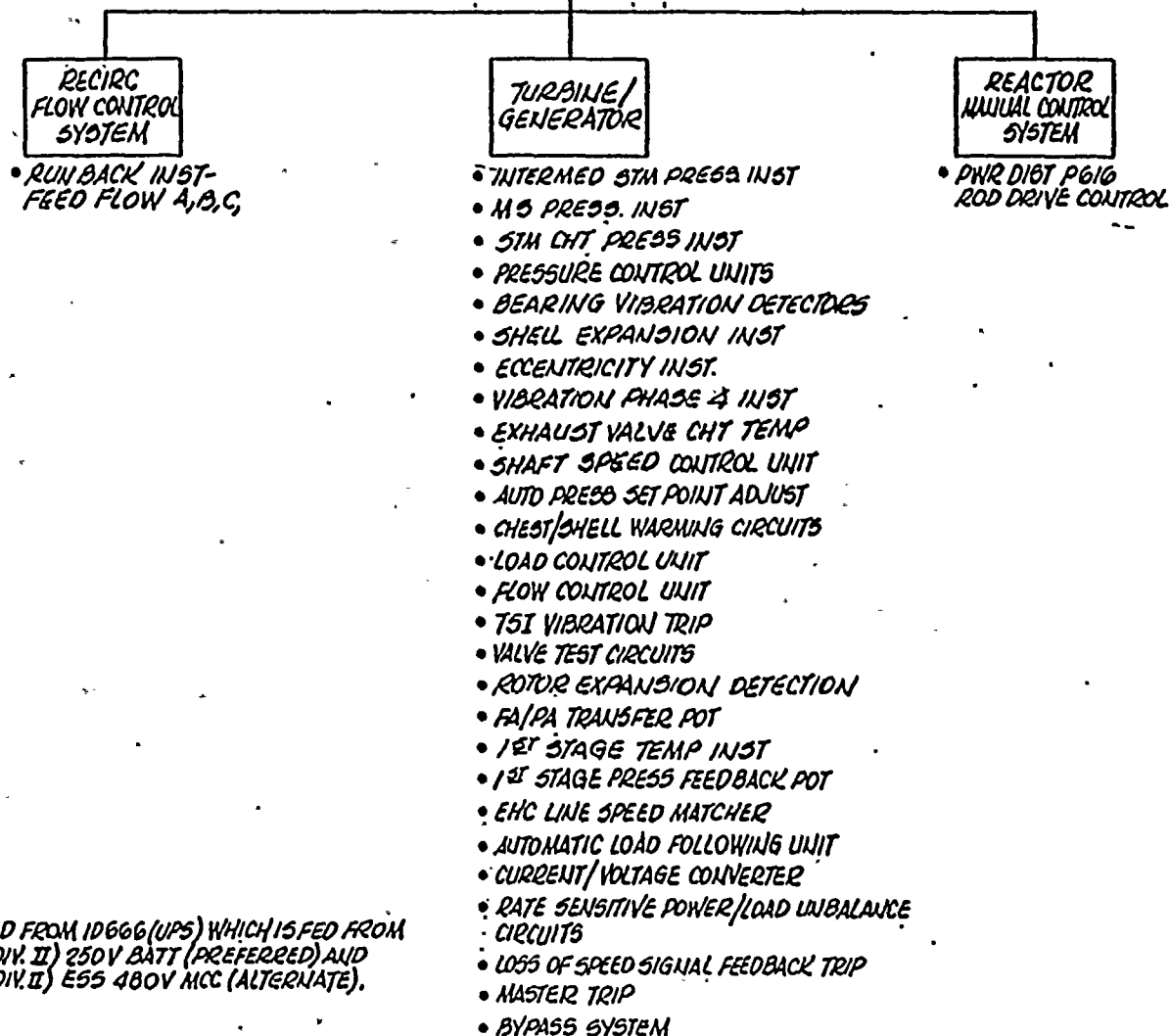
- PRESSURE RELIEF FLOW
MONITORING DIV. II

NOTES:


1Y226 FED FROM 1B226 (DIV. II) ESS 480 V MCC.

REVISIONS		DWR	CHK	APP	DATE
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION COMMONALITY DIAGRAM-POWER SUPPLY-1Y226					
 nuclear	SCALE:	DRAWN	CHECKED	APPROVED	DATE
	-11	FJD	JAI	WPK	10/11
	JOB NO		DRAWING NO		REV.
0160-004-871		0160-004-917		0	

IY629 120 VAC
NON CLASS 1E



NOTES:
IY629 FED FROM ID666 (UPS) WHICH IS FED FROM
ID660 (DIV. II) 250V BATT (PREFERRED) AND
1B246 (DIV. II) ESS 480V MCC (ALTERNATE).

NO	REVISIONS				DES	CHK	APPV	DATE
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION COMMONALITY DIAGRAM-POWER SUPPLY-IY629								
 nuclear	SCALE:	DRAWN	CHECKED	APPROVED	DATE			
	-11-	R/D	JAI	JJB	7/1/81			
	JOB NO		DRAWING NO			REV		
0160-004-871		0160-004-018			0			

1Y218
AND
1Y219

CASCADING
POWER SUPPLY
EFFECT

RECIRC
FLOW CONTROL
SYSTEM

- FLOW CONTROL A
- FLOW CONTROL B
- MASTER CONTROLLER
- RUNBACK INST-
CONDENSATE PRESS
(L) A/B

REACTOR
MANUAL CONTROL
SYSTEM

- PWR DIST P610
SCRAM TEST PKL
- PWR DIST P615
ROD POSN INFO
- PWR DIST P659
ROD SEQUENCE CONTROL
- PWR DIST P680-FULL
CORE DISPLAY, ROD
SELECT SWITCHES
- CRD HYD CONTROL
- 1ST STAGE TURBINE TRIP
INST.
- CRD TEMP MONITORING

NUCLEAR
PRESSURE
RELIEF
SYSTEM

- TEMP MONITORING
(DOWNSTREAM
LEAKAGE)

TURBINE/
GENERATOR

- LEVEL 8 TRIP-
(HIGH R_x WATER
LEVEL)

NEUTRON
MONITORING
SYSTEM
- TIP -

- CONTROL INST

REACTOR
WATER CLEANUP
SYSTEM


- DIFF. FLOW INST.
- PUMP CLG WATER
TEMP INST
- SOLENOID VALVE CONTROL
PRESSURE SWITCHES

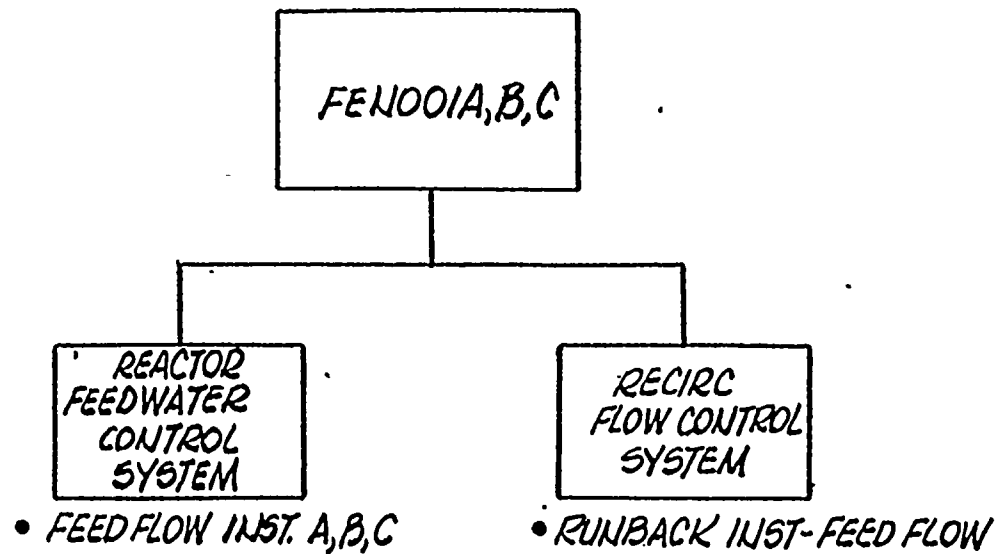
REACTOR
FEEDWATER
CONTROL
SYSTEM


- HI TURBINE STM FLOW
- LOW FLOW CONTROLLER
- FEEDWATER PUMP CONTROL
- FEEDWATER PP TRIP INTLK/RELK
- FEEDWATER FLOW INST A,C
- REACTOR PRESS INST
- STM FLOW INST
- REACTOR WATER LEVEL INST(A)
- REACTOR WIDE RANGE LEVEL INST
- LEVEL 8 TRIP (HIGH R_x WATER LEVEL)

NOTES:

SEE COMMONALITY DIAGRAMS FOR 1Y218 & 1Y219
FOR POWER SOURCE INFORMATION

NO	REVISIONS	DES	CHK	APP	DATE
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION COMMONALITY DIAGRAM-POWER SUPPLY-1Y218/1Y219					
 nuclear	SCALE	DRAWN	CHECKED	APPROVED	DATE
	-1-	FJD	PAI	1/1	11/21/89
	JOB NO.		DRAWING NO.		REV
0160-004-071		0160-004-019		0	



NO	REVISIONS				OWN	CHK	APPV	DATE
THE PENNSYLVANIA POWER & LIGHT COMPANY SUSQUEHANNA STEAM ELECTRIC STATION COMMONALITY DIAGRAM-SENSOR-FE NO01A,B,C								
 eksis nuclear	SCALE:	DRAWN	CHECKED	APPROVED	DATE			
	-11-	FJD	[Signature]	[Signature]	02/18			
	JOB NO		DRAWING NO		REV			
0160-004-071		0160-004-020		0				