

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9206050138 DOC.DATE: 92/06/02 NOTARIZED: NO DOCKET #
 FACIL:50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251

AUTH.NAME PLUNKETT,T.F. AUTHOR AFFILIATION Florida Power & Light Co.
 RECIP.NAME RECIPIENT AFFILIATION

Document Control Branch (Document Control Desk)

SUBJECT: Forwards listed documents, in response to 920512 RAI to support technical review of 920421 proposed license amends re 480 volt load ctrs degraded voltage protection scheme. W/one oversize drawing.

DISTRIBUTION CODE: A001D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 38+246
 TITLE: OR Submittal: General Distribution

NOTES:NRR RAGHAVAN,L
 NRR RAGHAVAN,L

05000250 A
 05000251 D

See Reports

RECIPIENT ID CODE/NAME	COPIES		RECIPIENT ID CODE/NAME	COPIES	
	LTTR	ENCL		LTTR	ENCL
PD2-2 LA	1	1	PD2-2 PD	1	1
AULUCK,R	2	2			

INTERNAL: NRR/DET/ECMB 7D	1	1	NRR/DET/ESGB	1	1
NRR/DOEA/OTSB11	1	1	NRR/DST 8E2	1	1
NRR/DST/SELB 7E	1	1	NRR/DST/SICB8H7	1	1
NRR/DST/SRXB 8E	1	1	NUDOCS-ABSTRACT	1	1
OC/LEMB	1	0	OGC/HDS3	1	0
<u>REG FILE</u> 01	1	1	RES/DSIR/EIB	1	1
EXTERNAL: NRC PDR	1	1	NSIC	1	1

NOTES: 1 1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 19 ENCL 17

Act



JUN 02 1992

L-92-162
10 CFR 50.90

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Request for Additional Information (RAI) -
Proposed License Amendments: 480 Volt Load Centers
Degraded Voltage Protection Scheme

By letter L-92-097, dated April 21, 1992, Florida Power and Light Company (FPL) submitted a request to amend the Turkey Point Technical Specifications. In a discussion between FPL and the staff on May 12, 1992, the NRC requested additional information to support the technical review of the proposed license amendments. In response to this request, enclosed are the following documents:

- o A copy of the logic and schematic diagrams are provided as Attachment 1.
- o A copy of the relay setpoint calculations is provided as Attachment 2.
- o A copy of the calculation for coordination between undervoltage and overcurrent protection is provided as Attachment 3.
- o The results of the Failure Modes and Effects Analysis are documented in Section 2.1.2 of the design implementation package, provided as Attachment 4.
- o Instructions regarding installation and testing of the relays are provided in Sections 8.0, 9.0, 13.0 and 14.0 of the design implementation package, provided as Attachment 4.

On May 27, 1992, FPL discussed with the staff the proposed implementation schedule for the addition of the two definite time delay relays to the 480 volt undervoltage protection scheme with no safety injection. As discussed, these modifications are scheduled to be implemented during the next refueling outage for each unit. The refueling outages are currently scheduled to begin on August 24, 1992 for Unit 3 and February 28, 1993 for Unit 4.

Should there be any question, please contact us.

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Nuclear

Attachments
TFP/RJT/rt

920605013B 920602
PDR ADDOCK 05000250
PDR

040073

an FPL Group company

ADD 1/1

L-92-162
Page 2

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant
Mr. Jacob Daniel Nash, Florida Department of Health and
Rehabilitative Services

15

三

27.

Detailed description of Figure 1: The graph plots 'Percentage of total catch' on the y-axis (0 to 100) against 'Percentage of total effort' on the x-axis (0 to 100). Two data series are shown: Species A (solid line with open circles) and Species B (dashed line with open circles). Both curves are bell-shaped, peaking at approximately 40% effort. Species A's peak is at about 85% catch, while Species B's peak is at about 75% catch. Both curves decline as effort increases beyond 40%.

Percentage of total effort	Percentage of total catch (Species A)	Percentage of total catch (Species B)
0	0	0
10	10	5
20	40	25
30	70	55
40	85	75
50	70	55
60	40	25
70	10	5
80	0	0
90	0	0
100	0	0

STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

T. F. Plunkett being first duly sworn, deposes and says:

That he is Vice President, Turkey Point Nuclear, of Florida Power and Light Company, the Licensee herein;

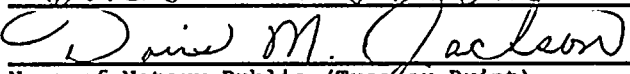
That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.



T. F. Plunkett

Subscribed and sworn to before me this

2 day of June, 1992.

DORIS M. JACKSON


Name of Notary Public (Type or Print)

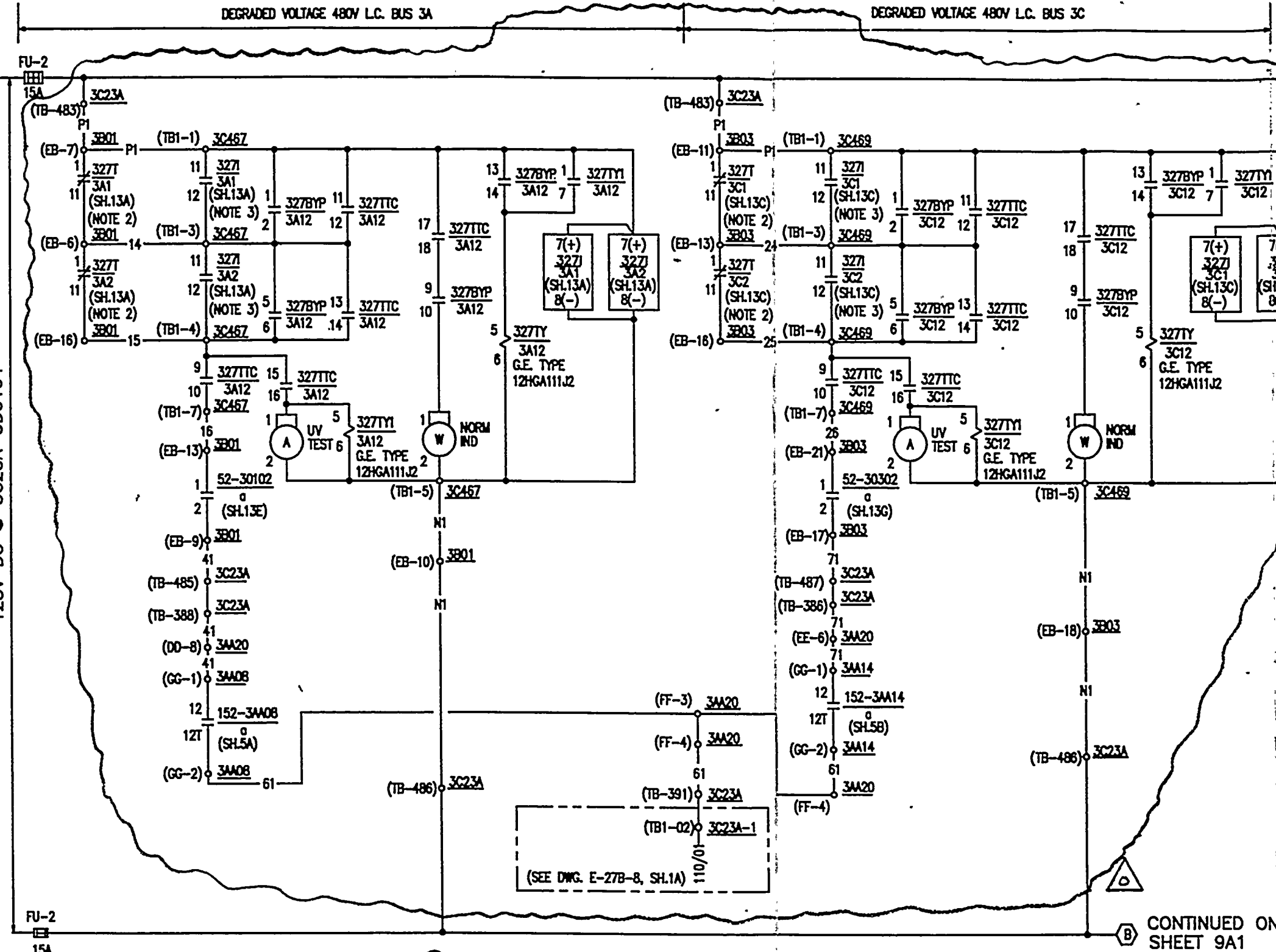
NOTARY PUBLIC, in and for the County of
Dade, State of Florida

My Commission expires Notary Public, State of Florida
Commission No. My Commission Expires Dec. 18, 1992
Bonded Three Troy Farm - Insurance Inc.

T. F. Plunkett is personally known to me.

112

112



CONTINUED ON SHEET 9A1

NOTE TO DWG UPDATE (NOT TO BE INCORP. ON ORIG. DWG.)

1d. THE 4KV BUS LOSS OF VOLTAGE AND SEQUENCER TEST CIRCUITS WERE MOVED TO SH.9A2 TO FACILITATE INCORPORATION OF PC/M 91-128. SEE NOTE 2d ON 5613-E-28, SH.9A2/91-128.

- NOTES:
- SEE SHEET 9A3 FOR RELAY CONTACT ASSIGNMENT AND SHEETS 9A2 & 9A3 FOR SWITCH DEVELOPMENTS.
 - 327T RELAY SEAL-IN CONTACT HAS BEEN DISCONNECTED.
 - 327T RELAY CONTACTS 11-12 CLOSE ON LOAD CENTER AC UNDERVOLTAGE AND REMAIN OPEN ON LOSS OF DC CONTROL POWER AT POINTS 7-8.
 - ALL DRAWING REFERENCES ARE 5613 UNLESS NOTED OTHERWISE.

REFERENCE DRAWINGS

5610-E-3008 STANDARDS DOC.
5610-E-300A EQUIPMENT NUMBERS

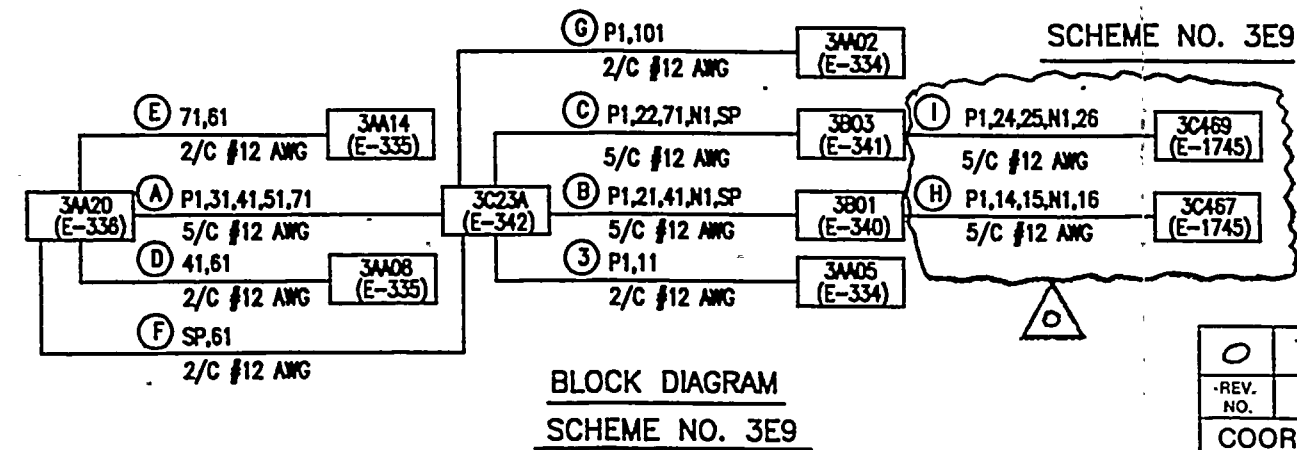
INTERNAL WIRING

5613-E-27A-10 3C23A
5613-E-27A-11 3C23A
5613-E-27A-12 3C23A
5613-E-27A-13 3C23A
5613-E-27A-14 3C23A
5613-E-9-2 SH.3A 3801
5613-E-9-4 SH.3A 3803

CONTROL POWER

5613-E-11 3D0104

Also Available on Aperture Card



SCHEME NO. 3E9

NOTE: THIS DWG IS MADE FROM:

(VENDOR) DWG. NO. _____

(A/E) DWG. NO. _____ REV. _____

FPL DWG. NO. 5613-E-28, SH.9A REV. 1

COORDINATION SIGN-OFF

0	FES	N/R	N/R	H/R
REV. NO.	ELECTICS	MECH.	CIVIL	PLANT FACILITIES

NUCLEAR SAFETY RELATED

TURKEY POINT NUCLEAR UNIT 3

ELEMENTARY DIAGRAM

ELECTRICAL AUXILIARIES
LOSS OF VOLTAGE
BUS 3A

BECHTEL

DWG NO. 5613-E-28

JOB NO. 21701-523

PC/M 91-128 SHEET 9A/91-128

SYS 024

REV 0

WILSON CO
WILSON CO

WILSON CO
WILSON CO

When Card
is Available On

BY CARD
ENCLOSURE
21

3-27-92 ISSUED FOR CONSTRUCTION FOR PC/M 91-128. 0 3-27-92 DATE

BY CH APP

REVISION

327TY/3A12				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-7	N.O.	ANNUNCIATION		E28 SH.9C
3-7	N.C.	NOT USED		
2-8	N.O.	SPARE		
4-8	N.C.	SPARE		

327TY1/3A12				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-7	N.O.	ANNUNCIATION		E28 SH.9C
3-7	N.C.	NOT USED		
2-8	N.O.	SPARE		
4-8	N.C.	SPARE		

127HX/3A1				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	SPARE CIRCUIT		E28 SH 9A1
3-4	N.O.	SPARE CIRCUIT		E28 SH 9A1
7-8	N.O.	SPARE		
9-10	N.O.	SPARE		
11-12	N.O.	SPARE		
13-14	N.C.	SPARE		
15-16	N.O.	SPARE		
17-18	N.C.	SPARE		

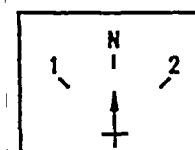
127HX/3A2				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	SPARE CIRCUIT		E28 SH 9A1
3-4	N.O.	SPARE CIRCUIT		E28 SH 9A1
7-8	N.O.	SPARE		
9-10	N.O.	SPARE		
11-12	N.O.	SPARE		
13-14	N.C.	SPARE		
15-16	N.O.	SPARE		
17-18	N.C.	SPARE		

127HY/3A12				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	SPARE CIRCUIT		E28 SH 9A1
3-4	N.O.	SPARE CIRCUIT		E28 SH 9A1
7-8	N.O.	SPARE		
9-10	N.O.	SPARE		
11-12	N.O.	SPARE		
13-14	N.C.	SPARE		
15-16	N.O.	SPARE		
17-18	N.C.	SPARE		

327HX/3A12				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	INDICATION		E28 SH 9A1
3-4	N.O.	INDICATION		E28 SH 9A1
7-8	N.O.	ANNUNCIATION		E28 SH 9C ← SEE NOTE 1d
9-10	N.O.	SPARE		
11-12	N.O.	SPARE		
13-14	N.C.	SPARE		
15-16	N.O.	SPARE		
17-18	N.C.	SPARE		

327TY/3C12				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-7	N.O.	ANNUNCIATION		E28 SH.9C
3-7	N.C.	NOT USED		
2-8	N.O.	SPARE		
4-8	N.C.	SPARE		

327TY1/3C12				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-7	N.O.	ANNUNCIATION		E28 SH.9A
3-7	N.C.	NOT USED		
2-8	N.O.	SPARE		
4-8	N.C.	SPARE		



UNDervOLTAGE RELAY
BYPASS SWITCH
IN 3C467
MAINTAINED CONTACTS
KEY REMOVABLE
IN ALL POSITIONS
ELECTROSWITCH
NO. 20K-908C8-2
TAG: 327BYP/3A12

CONTACT NO.	POSITION			FUNCTION	DWG.
	1	N	2		
1-2	X	0	0	BYPASS CH1 U/V	SH.9A
3-4	X	0	0	SPARE	
5-6	0	0	X	BYPASS CH2 U/V	SH.9A
7-8	0	0	X	SPARE	
9-10	0	X	0	NORMAL INDICATION	SH.9A
11-12	0	X	0	SPARE	
13-14	X	0	X	ANNUNCIATION	SH.9A
15-16	X	0	X	SPARE	

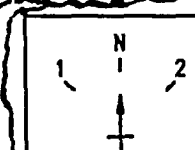
NOTES:
1. ALL DRAWING REFERENCES ARE 5613 UNLESS NOTED OTHERWISE.

NOTE TO DWG UPDATE (NOT TO INCORP. ON ORIG. DWG)
1d. THIS CHANGE IS FOR DWG CORRECTION ONLY
AND IS NOT A PART OF THE PC/M 91-128.

REV. NO.	ELECT/CS	MECH.	CIVIL	PLANT FACILITIES
0		N/R	N/R	N/R

COORDINATION SIGN-OFF

327HX/3C12				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	INDICATION		E28 SH 9A1
3-4	N.O.	INDICATION		E28 SH 9A1
7-8	N.O.	ANNUNCIATION		E28 SH 9C ← SEE NOTE 1d
9-10	N.O.	SPARE		
11-12	N.O.	SPARE		
13-14	N.C.	SPARE		
15-16	N.O.	SPARE		
17-18	N.C.	SPARE		



UNDervOLTAGE RELAY
BYPASS SWITCH
IN 3C469
MAINTAINED CONTACTS
KEY REMOVABLE
IN ALL POSITIONS
ELECTROSWITCH
NO. 20K-908C8-2
TAG: 327BYP/3C12

CONTACT NO.	POSITION			FUNCTION	DWG.
	1	N	2		
1-2	X	0	0	BYPASS CH1 U/V	SH.9A
3-4	X	0	0	SPARE	
5-6	0	0	X	BYPASS CH2 U/V	SH.9A
7-8	0	0	X	SPARE	
9-10	0	X	0	NORMAL INDICATION	SH.9A
11-12	0	X	0	SPARE	
13-14	X	0	X	ANNUNCIATION	SH.9A
15-16	X	0	X	SPARE	

NOTE: THIS DWG IS MADE FROM:
(VENDOR) DWG. NO. _____
(A/E) DWG. NO. _____ REV. _____
FPL DWG NO. 5613-E-28, SH.9A3 REV. 2.

NUCLEAR SAFETY RELATED

	TURKEY POINT NUCLEAR UNIT 3	
	ELEMENTARY DIAGRAM	
	ELECTRICAL AUXILIARIES LOSS OF VOLTAGE BUS 3A RELAY DEVELOPMENT	
BECHTEL		
DWG NO 5613-E-28		SYS 024
JOB No. 21701-523		REV 0
PC/M 91-128		SHEET 9A3/91-128

9206050138-03 128ED9A3.DWG

Adventure Card
Also Available On
Adventure
Card
21

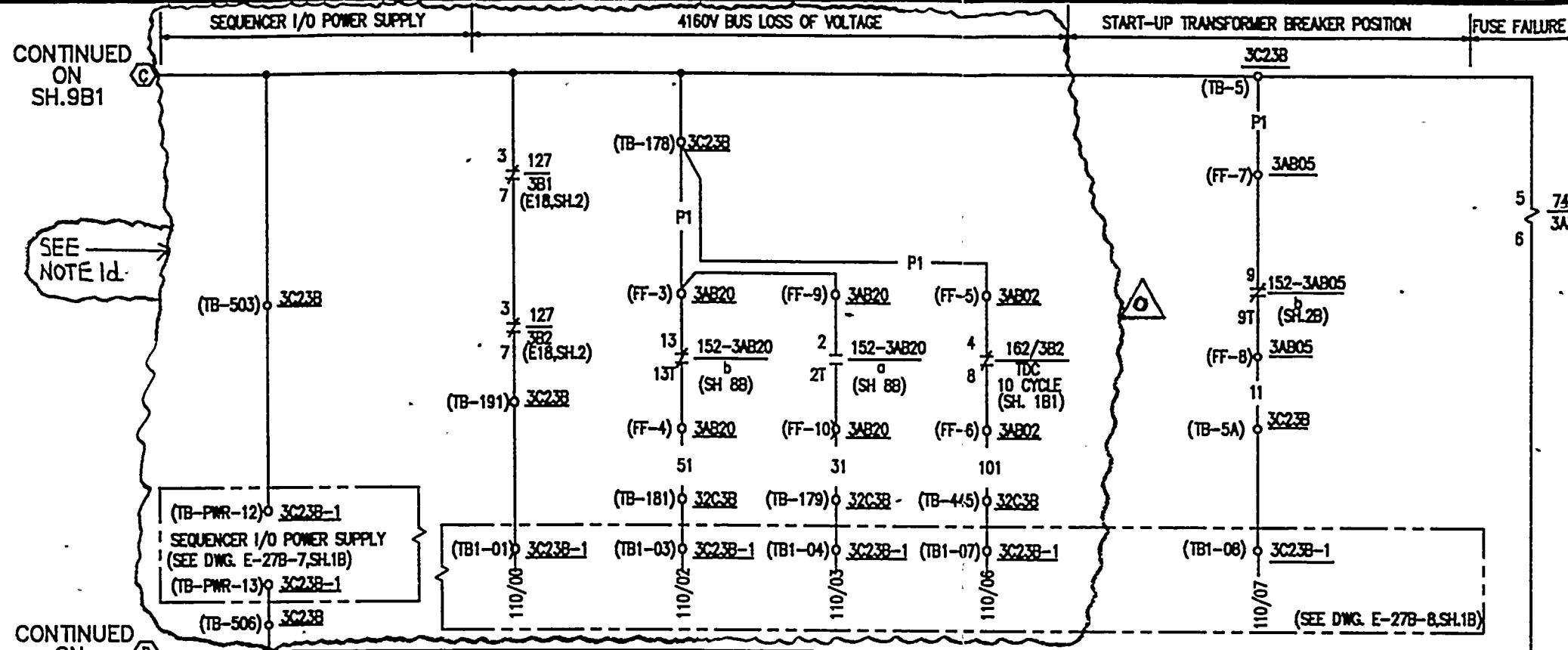
HERMAN CUNY
JANUARY 16 1928

19

6-7-55

3-27-92 ISSUED FOR CONSTRUCTION FOR PC/M 91-128

REV	DATE	BY	CH	APP
0				



SCHEME NO. 3E9A (CONTINUED)

11 N 21
12 22
+
UNDERVOLTAGE RELAY TEST SWITCH IN 3C470
MAINTAINED BREAK BEFORE MAKE CONTACTS
KEY REMOVABLE IN N (NORMAL) POSITION
(ELECTROSWITCH NO. 20K-909C8-1)
TAG: 327 TTC/3D12

CONTACT NO.	POSITION	FUNCTION	DRAWING
1-2	X O X X X	APPLY U/V TO 327/3D1	SH.13D
3-4	O X X X X	APPLY U/V TO 327/3D1	SH.13D
5-6	X X X O X	APPLY U/V TO 327/3D2	SH.13D
7-8	X X X X O	APPLY U/V TO 327/3D2	SH.13D
9-10	O O X O O	PERMISSIVE TO AUTO TRIP	SH.98
11-12	O O O X X	BYPASS CH.1 TO TEST CH.2	SH.98
13-14	X X O O O	BYPASS CH.2 TO TEST CH.1	SH.98
15-16	X X O X X	PERMISSIVE TO TEST	SH.98
17-18	O O X O O	NORMAL INDICATION	SH.98

X-DENOTES CONTACT CLOSED

11 N 21
12 22
+
UNDERVOLTAGE RELAY TEST SWITCH IN 3C458
MAINTAINED BREAK BEFORE MAKE CONTACTS
KEY REMOVABLE IN N (NORMAL) POSITION
(ELECTROSWITCH NO. 20K-909C8-1)
TAG: 327 TTC/3B12

CONTACT NO.	POSITION	FUNCTION	DRAWING
1-2	X O X X X	APPLY U/V TO 327/3B1	SH.13B
3-4	O X X X X	APPLY U/V TO 327/3B1	SH.13B
5-6	X X X O X	APPLY U/V TO 327/3B2	SH.13B
7-8	X X X X O	APPLY U/V TO 327/3B2	SH.13B
9-10	O O X O O	PERMISSIVE TO AUTO TRIP	SH.98
11-12	O O O X X	BYPASS CH.1 TO TEST CH.2	SH.98
13-14	X X O O O	BYPASS CH.2 TO TEST CH.1	SH.98
15-16	X X O X X	PERMISSIVE TO TEST	SH.98
17-18	O O X O O	NORMAL INDICATION	SH.98

X-DENOTES CONTACT CLOSED

1 N 2
+
UNDERVOLTAGE RELAY TEST SWITCH IN 3C238
SPRING RETURN TO N (NORMAL) FROM BOTH 1 & 2
KEY REMOVABLE IN N (NORMAL) POSITION
(ELECTROSWITCH NO. 20PJ-0908S3-001)
TAG: 127 HTC/3B12

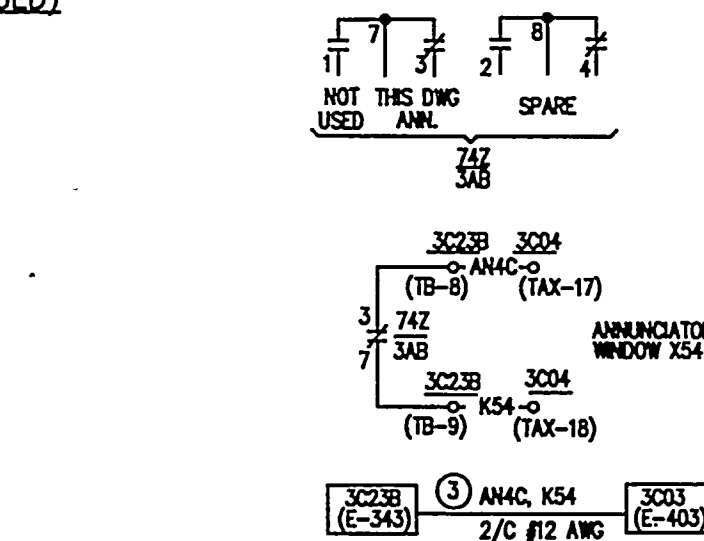
CONTACT NO.	POSITION	FUNCTION	DRAWING
1-2	O X O	SPARE CIRCUIT	SH.981
3-4	X O X	SPARE CIRCUIT	SH.981
5-6	X X O	SPARE	
7-8	O X X	SPARE	
9-10	X O O	SPARE CIRCUIT	SH.981
11-12	O O X	SPARE CIRCUIT	SH.981
13-14	O X O	SPARE CIRCUIT	SH.981
15-16	X O X	ANNUNCIATION	SH.9C

X-DENOTES CONTACT CLOSED

1 N 2
+
UNDERVOLTAGE RELAY TEST SWITCH IN 3B04
SPRING RETURN TO N (NORMAL) FROM BOTH 1 & 2
KEY REMOVABLE IN N (NORMAL) POSITION
(ELECTROSWITCH NO. 20PJ-0908S3-001)
TAG: 327 HTC/3D12

CONTACT NO.	POSITION	FUNCTION	DRAWING
1-2	O X O	PERMISSIVE TO AUTO TRIP	SH.981
3-4	X O X	PERMISSIVE TO TEST	SH.981
5-6	X X O	APPLY U/V TO CH.2	SH.13D
7-8	O X X	APPLY U/V TO CH.1	SH.13D
9-10	X O O	BYPASS CH.2	SH.981
11-12	O O X	BYPASS CH.1	SH.981
13-14	O X O	NORMAL AFTER CHECK	SH.981
15-16	X O X	ANNUNCIATION	SH.9C

X-DENOTES CONTACT CLOSED



SCHEME NO. KC4

1 N 2
+
UNDERVOLTAGE RELAY TEST SWITCH IN 3B02
SPRING RETURN TO N (NORMAL) FROM BOTH 1 & 2
KEY REMOVABLE IN N (NORMAL) POSITION
(ELECTROSWITCH NO. 20PJ-0908S3-001)
TAG: 327 HTC/3B12

CONTACT NO.	POSITION	FUNCTION	DRAWING
1-2	O X O	PERMISSIVE TO AUTO TRIP	SH.981
3-4	X O X	PERMISSIVE TO TEST	SH.981
5-6	X X O	APPLY U/V TO CH.2	SH.13B
7-8	O X X	APPLY U/V TO CH.1	SH.13B
9-10	X O O	BYPASS CH.2	SH.981
11-12	O O X	BYPASS CH.1	SH.981
13-14	O X O	NORMAL AFTER CHECK	SH.981
15-16	X O X	ANNUNCIATION	SH.9C

X-DENOTES CONTACT CLOSED

NOTE TO DWG UPDATE (NOT TO BE INCORP. ON ORIG. DWG)

1d. THESE CIRCUITS ARE NOT REVISED BY PC/M 91-128 BUT ARE MOVED FROM SHEET 9A TO MAKE ROOM FOR PC/M 91-128. HOWEVER THE DESCRIPTION "SEQUENCER TEST CIRCUIT" WAS CHANGED TO SEQUENCER I/O POWER SUPPLY AS PART OF A DRAWING ENHANCEMENT. IN ADDITION, DRAWING UPDATE IS TO REVISE DWG'S 5613-E-28, SH.1B1 & SH.1B1 & 5613-E-18, SH.2 TO SHOW THESE RELAY CONTACTS MOVED FROM SHEET 9B TO 9B2.

NOTES:

1. DELETED
2. FOR BLOCK DIAGRAM SEE SHEET 9B.
3. ALL DRAWING REFERENCES ARE 5613 UNLESS NOTED OTHERWISE.

REFERENCE DRAWINGS

5610-E-300B
5610-E-300A
5610-E-38
STANDARD DOC.
EQUIPMENT NUMBERS
ANNUNCIATOR

INTERNAL WIRING

5613-E-27A-17
5613-E-27A-18
5613-E-27A-19
5613-E-27A-20
5613-E-27A-21
3C238
3C238
3C238
3C238
3C238

SI
APERTURE
CARD

Also Available On
Aperture Card

REV. NO.	ELECT/CS	MECH.	CIVIL	PLANT FACILITIES
0		N/R	N/R	N/R

COORDINATION SIGN-OFF

NOTE: THIS DWG IS MADE FROM: _____ (VENDOR) DWG. NO. _____
(A/E) DWG. NO. _____ REV. _____
FPL DWG NO. 5613-E-28, SH.9B2 REV. 2

NUCLEAR SAFETY RELATED

FPL TURKEY POINT NUCLEAR UNIT 3
ELEMENTARY DIAGRAM
ELECTRICAL AUXILIARIES
LOSS OF VOLTAGE
BUS 3B
BECHTEL

JOB No. 21701-523
PC/M 91-128
DWG NO. 5613-E-28
SHEET 9B2/91-128
SYS 024
REV 0

9206050138-05 12/20/92 DWG

Volume 104
1920-1921
CARD
ABSTRACT
21

REV 0 3-21-92 ISSUED FOR CONSTRUCTION FOR PC/M 91-128

REVISION

BY CH APP

APP

327TY/3812				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-7	N.O.	ANNUNCIATION		E28 SH 9C
3-7	N.C.	NOT USED		
2-8	N.O.	SPARE		
4-8	N.C.	SPARE		

327TY1/3812				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-7	N.O.	ANNUNCIATION		E28 SH 9C
3-7	N.C.	NOT USED		
2-8	N.O.	SPARE		
4-8	N.C.	SPARE		

127HX/381				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	SPARE CIRCUIT		E28 SH 981
3-4	N.O.	SPARE CIRCUIT		E28 SH 981
7-8	N.O.	SPARE		
9-10	N.O.	SPARE		
11-12	N.O.	SPARE		
13-14	N.C.	SPARE		
15-16	N.O.	SPARE		
17-18	N.C.	SPARE		

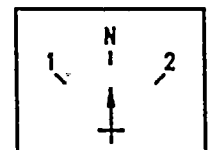
127HX/382				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	SPARE CIRCUIT		E28 SH 981
3-4	N.O.	SPARE CIRCUIT		E28 SH 981
7-8	N.O.	SPARE		
9-10	N.O.	SPARE		
11-12	N.O.	SPARE		
13-14	N.C.	SPARE		
15-16	N.O.	SPARE		
17-18	N.C.	SPARE		

127HY/3812				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	SPARE CIRCUIT		E28 SH 981
3-4	N.O.	SPARE CIRCUIT		E28 SH 981
7-8	N.O.	SPARE		
9-10	N.O.	SPARE		
11-12	N.O.	SPARE		
13-14	N.C.	SPARE		
15-16	N.O.	SPARE		
17-18	N.C.	SPARE		

327HX/3812				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	INDICATION		E28 SH 981
3-4	N.O.	INDICATION		E28 SH 981
7-8	N.O.	ANNUNCIATION		E28 SH 9C
9-10	N.O.	SPARE		
11-12	N.O.	SPARE		
13-14	N.C.	SPARE		
15-16	N.O.	SPARE		
17-18	N.C.	SPARE		

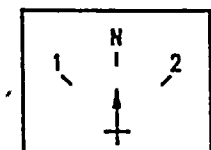
327TY/3D12				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-7	N.O.	ANNUNCIATION		E28 SH 9C
3-7	N.C.	NOT USED		
2-8	N.O.	SPARE		
4-8	N.C.	SPARE		

327TY1/3D12				
CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-7	N.O.	ANNUNCIATION		E28 SH 98
3-7	N.C.	NOT USED		
2-8	N.O.	SPARE		
4-8	N.C.	SPARE		



UNDERVOLTAGE RELAY
BYPASS SWITCH
IN 3C468
MAINTAINED CONTACTS
KEY REMOVABLE
IN ALL POSITIONS
ELECTROSWITCH
NO 20K-908C8-2
TAG: 327BYP/3812

CONTACT NO.	POSITION			FUNCTION	DWG.
	1	N	2		
1-2	X	0	0	BYPASS CH-1 U/V	SH.9D
3-4	X	0	0	SPARE	
5-6	0	0	X	BYPASS CH-2 U/V	SH.9B
7-8	0	0	X	SPARE	
9-10	0	X	0	NORMAL INDICATION	SH.9B
11-12	0	X	0	SPARE	
13-14	X	0	X	ANNUNCIATION	SH.9B
15-16	X	0	X	SPARE	



UNDERVOLTAGE RELAY
BYPASS SWITCH
IN 3C470
MAINTAINED CONTACTS
KEY REMOVABLE
IN ALL POSITIONS
ELECTROSWITCH
NO 20K-908C8-2
TAG: 327BYP/3D12

CONTACT NO.	POSITION			FUNCTION	DWG.
	1	N	2		
1-2	X	0	0	BYPASS CH-1 U/V	SH.9B
3-4	X	0	0	SPARE	
5-6	0	0	X	BYPASS CH-2 U/V	SH.9B
7-8	0	0	X	SPARE	
9-10	0	X	0	NORMAL INDICATION	SH.9B
11-12	0	X	0	SPARE	
13-14	X	0	X	ANNUNCIATION	SH.9B
15-16	X	0	X	SPARE	

SI
APERTURE
CARD

Also Available On
Aperture Card


NOTES:
1. ALL DRAWING REFERENCES ARE 5613 UNLESS NOTED OTHERWISE.

REV. NO.	ELECTICS	MECH.	CIVIL	PLANT FACILITIES
0	FIG	N/R	N/R	N/R

COORDINATION SIGN-OFF

NOTE: THIS DWG IS MADE FROM:
(VENDOR) DWG. NO. _____
(A/E) DWG. NO. _____ REV. _____
FPL DWG NO. 5613-E-28 SH.9B3 REV. 1

NUCLEAR SAFETY RELATED

 TURKEY POINT NUCLEAR UNIT 3
ELEMENTARY DIAGRAM

ELECTRICAL AUXILIARIES
LOSS OF VOLTAGE BUS 3B
RELAY DEVELOPMENT

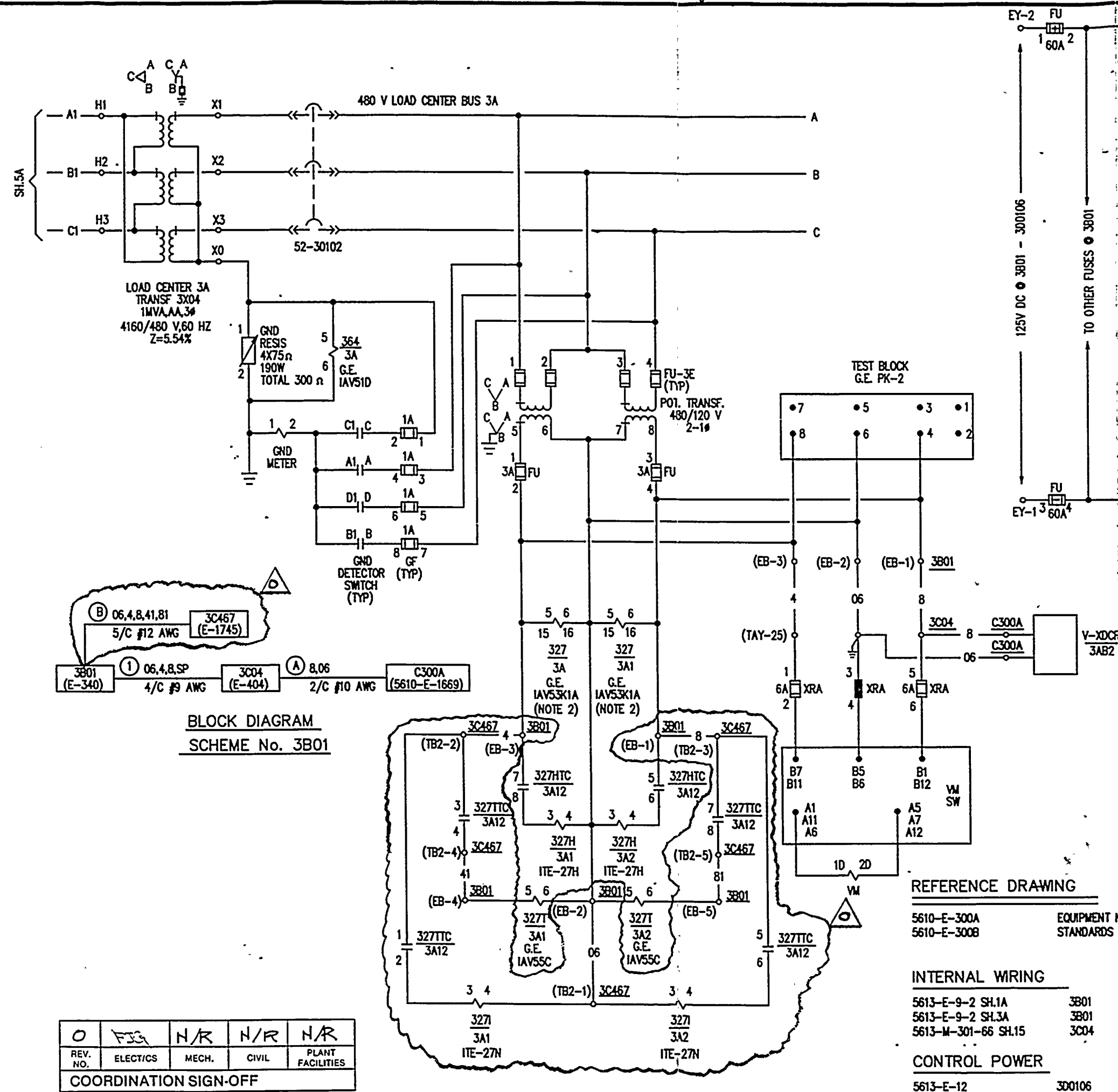
BECHTEL

JOB No. 21701-523	DWG NO. 5613-E-28	SYS 024
PC/M 91-128	SHEET 9B3/91-128	REV 0

9206050138-06

Wetmore C. 194
V. 190. 1. 1940
C. 194
V. 190. 1. 1940
C. 194
V. 190. 1. 1940

PHOTOGRAPH
OF
THE
REMARKS
OF
THE
OFFICER
IN
CHARGE



NOTES

1. ALL DRAWING REFERENCES ARE 5613 UNLESS NOTED OTHERWISE.
2. RELAYS TAGGED 327/3A AND 327/3A1 ARE COMBINATION UNDERVOLTAGE/OVERVOLTAGE RELAYS. CONTACT 10-20 CLOSING ON UNDERVOLTAGE. CONTACT 1-11 CLOSING ON OVERVOLTAGE.
3. SEE SH.13A1 FOR SWITCH DEVELOPMENT AND RELAY CONTACT ASSIGNMENT.
4. FOR SWITCH DEVELOPMENTS 327HTC/3A12 AND 327TTC/3A12 SEE E-28, SH.9A2.

NOTE: THIS DWG IS MADE FROM:

(VENDOR) DWG. NO.	
(A/E) DWG. NO.	REV.
FPL DWG. NO.	REV.

REFERENCE DRAWING

5610-E-300A
5610-E-300B

EQUIPMENT NUMBER
STANDARDS DOC.

INTERNAL WIRING

5613-E-9-2 SH.1A 3801
5613-E-9-2 SH.3A 3801
5613-M-301-66 SH.15 3C04

CONTROL POWER

5613-E-12 300106

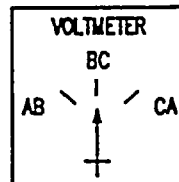
TURKEY POINT NUCLEAR UNIT 3	
ELEMENTARY DIAGRAM	
ELECTRICAL AUXILIARIES METERING AND RELAYING 480 V LOAD CENTER 3A	
BECHTEL	
DWG NO 5613-E-28	SYS 006
SHEET 13A/91-128	REV 0

REV. NO.	ELECT/CS	MECH.	CIVIL	PLANT FACILITIES
0	FIG	N/R	N/R	N/R

COORDINATION SIGN-OFF

7beime Cuy
VIRGINIA OR

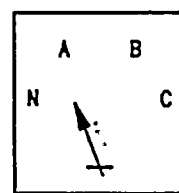
7beime Cuy
VIRGINIA OR



VOLT METER SWITCH
THREE POSITION
MAINTAINED
WESTINGHOUSE
TYPE W-2
TAG: VM SW

CONTACTS	POSITION			FUNCTION	DRAWING	
	AB	BC	CA			
A11-B11	X			ALIGN VM WITH # AB	E28	SH 13A
A12-B12		X		ALIGN VM WITH # BC	E28	SH 13A
A1-B1			X	ALIGN VM WITH # AC	E28	SH 13A
A5-B5	X			ALIGN VM WITH # AB	E28	SH 13A
A6-B6		X		ALIGN VM WITH # BC	E28	SH 13A
A7-B7			X	ALIGN VM WITH # AC	E28	SH 13A

X- DENOTES CONTACT CLOSED



GROUND DETECTOR
SWITCH
FOUR POSITION
MAINTAINED

CONTACTS	POSITION				FUNCTION	DRAWING	
	N	A	B	C			
A-A1		X			ALIGN GND MTR WITH # A	E28	SH 13A
B-B1				X	ALIGN GND MTR WITH # C	E28	SH 13A
C-C1	X				ALIGN GND MTR WITH NEU	E28	SH 13A
D-D1			X		ALIGN GND MTR WITH # B	E28	SH 13A

X- DENOTES CONTACT CLOSED

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	ANNUNCIATION		E28 SH 52A

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
10-11	N.C.	NOT USED		
11-12	N.O.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9A
13-14	N.C.	SPARE		
14-15	N.O.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	TRIP NONVITAL MCC NV 3A FEEDER	30103	E28 SH 12V
3-4	N.O.	SPARE		
5-6	N.C.	SPARE		
7-8	N.C.	SPARE		
9-10	N.O.	TRIP CKT	30104	E27 SH 54A
11-12	N.O.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
5-6	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9A1
9-10	N.O.	INDICATION		E28 SH 9A1
11-12	N.C.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.O.	RESET UNDERVOLTAGE AUX RELAYS		E28 SH 13A
10-20	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 13A

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9A
1-12	N.C.	NOT USED		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
10-11	N.C.	NOT USED		
11-12	N.O.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9A
13-14	N.C.	SPARE		
14-15	N.O.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
3-4	N.O.	TRIP NONVITAL MCC NV 3A FEEDER	30103	E28 SH 12V
5-6	N.C.	SPARE		
7-8	N.C.	SPARE		
9-10	N.O.	ANNUNCIATION		E28 SH 52A
11-12	N.O.	INTERLOCK FOR UNDESVOLTAGE CKT		E28 SH 13A

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
5-6	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9A1
9-10	N.O.	INDICATION		E28 SH 9A1
11-12	N.C.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.O.	RESET UNDERVOLTAGE AUX RELAYS		E28 SH 13A
10-20	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 13A

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9A
1-12	N.C.	NOT USED		

NOTES:

1. ALL DRAWING REFERENCES ARE 5613
UNLESS NOTED OTHERWISE.

SI
APERTURE
CARD

Also Available On
Aperture Card

9206050138-09

0	FJS	H/R	H/R	N/R
REV. NO.	ELECT/CS	MECH.	CIVIL	PLANT FACILITIES
COORDINATION SIGN-OFF				

NOTE: THIS DWG IS MADE FROM:
(VENDOR) DWG. NO. _____
(A/E) DWG. NO. _____ REV. _____
FPL DWG NO. 5613-E-28, SH 13A1 REV. 1

TURKEY POINT NUCLEAR UNIT 3

ELEMENTARY DIAGRAM

ELECTRICAL AUXILIARIES
METERING AND RELAYING
480V LOAD CENTER 3A

BECHTEL

JOB No.
21701-523

DWG NO
5613-E-28

PC/M 91-128

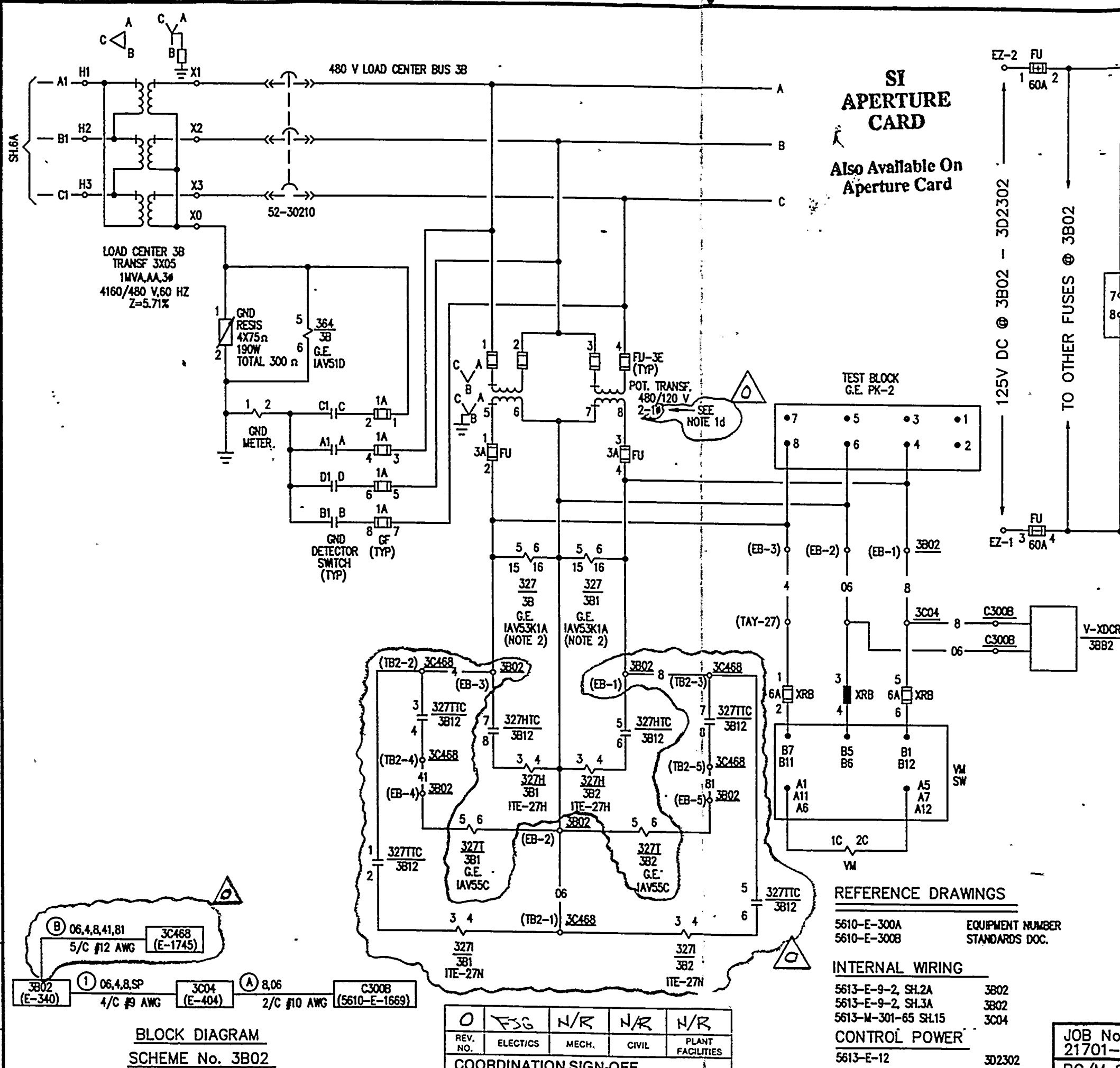
SHEET 13A1/91-128

SYS
006

REV
0

**Amesbury City
Public Library**

22



SI APERTURE CARD

Also Available On Aperture Card

NOTES

- ALL DRAWING REFERENCES ARE 5613 UNLESS NOTED OTHERWISE.
- RELAYS TAGGED 327/3B AND 327/3B1 ARE COMBINATION UNDERVOLTAGE/OVERVOLTAGE RELAYS. CONTACT 10-20 CLOSING ON UNDERVOLTAGE. CONTACT 1-11 CLOSING ON OVERVOLTAGE.
- SEE SHEET 13B1 FOR SWITCH DEVELOPMENT AND RELAY CONTACT ASSIGNMENT.
- FOR SWITCH DEVELOPMENT 327HTC/3B12 AND 327TTC/3B12 SEE 5613-E-28, SH.982.

NOTES TO DWG UPDATE (NOT TO BE INCORP. ON ORIG DWG)
1d. THIS CHANGE IS FOR DWG CORRECTION ONLY AND IS NOT PART OF PC/M 91-128.

NUCLEAR SAFETY RELATED

NOTE: THIS DWG IS MADE FROM:

(VENDOR) DWG. NO. _____

(A/E) DWG. NO. _____ REV. _____

FPL DWG NO. 5613-E-28, SH.138 REV. 2

REFERENCE DRAWINGS

5610-E-300A EQUIPMENT NUMBER
5610-E-300B STANDARDS DOC.

INTERNAL WIRING

5613-E-9-2, SH.2A 3B02
5613-E-9-2, SH.3A 3B02
5613-M-301-65 SH.15 3C04
5613-E-12 3D2302

CONTROL POWER

COORDINATION SIGN-OFF

REV. NO.	ELECT/CS	MECH.	CIVIL	PLANT FACILITIES
0	ESG	N/R	N/R	N/R

BLOCK DIAGRAM
SCHEME No. 3B02

COORDINATION SIGN-OFF

3B02 (E-340) 06,4,8,41,81 5/C #12 AWG 3C468 (E-1745)

3C04 (E-404) 06,4,8,SP 4/C #9 AWG 2/C #10 AWG (5610-E-1669) C300B

TURKEY POINT NUCLEAR UNIT 3

ELEMENTARY DIAGRAM

ELECTRICAL AUXILIARIES
METERING AND RELAYING
480V LOAD CENTER 3B

BECHTEL

DWG NO
5613-E-28

JOB No.
21701-523

PC/M 91-128

SHEET 13B/91-128

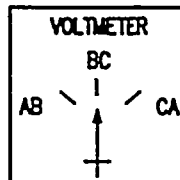
SYS 006

REV 0

9206050138-10

1950-1951
1952-1953
1954-1955
1956-1957
1958-1959
1960-1961
1962-1963
1964-1965
1966-1967
1968-1969
1970-1971
1972-1973
1974-1975
1976-1977
1978-1979
1980-1981
1982-1983
1984-1985
1986-1987
1988-1989
1990-1991
1992-1993
1994-1995
1996-1997
1998-1999
2000-2001
2002-2003
2004-2005
2006-2007
2008-2009
2010-2011
2012-2013
2014-2015
2016-2017
2018-2019
2020-2021
2022-2023
2024-2025

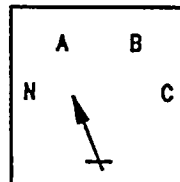
3-21-92
REV
DATE
ISSUED FOR CONSTRUCTION FOR PC/M 91-128
REVISION
BY
CH
APP
APP



VOLT METER SWITCH
THREE POSITION
MAINTAINED
WESTINGHOUSE
TYPE W-2
TAG: VM SW

CONTACTS	POSITION			FUNCTION	DRAWING	
	AB	BC	CA			
A11-B11	X			ALIGN VM WITH # AB	E28	SH 13B
A12-B12		X		ALIGN VM WITH # BC	E28	SH 13B
A1-B1			X	ALIGN VM WITH # AC	E28	SH 13B
A5-B5	X			ALIGN VM WITH # AB	E28	SH 13B
A6-B6		X		ALIGN VM WITH # BC	E28	SH 13B
A7-B7			X	ALIGN VM WITH # AC	E28	SH 13B

X- DENOTES CONTACT CLOSED



GROUND DETECTOR
SWITCH
FOUR POSITION
MAINTAINED

CONTACTS	POSITION				FUNCTION	DRAWING	
	N	A	B	C			
A-A1		X			ALIGN GND MTR WITH # A	E28	SH 13B
B-B1				X	ALIGN GND MTR WITH # C	E28	SH 13B
C-C1	X				ALIGN GND MTR WITH NEU	E28	SH 13B
D-D1			X		ALIGN GND MTR WITH # B	E28	SH 13B

X- DENOTES CONTACT CLOSED

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	ANNUNCIATION		E28 SH 52A

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
10-11	N.C.	NOT USED		
11-12	N.O.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9B
13-14	N.C.	SPARE		
14-15	N.O.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
10-11	N.C.	NOT USED		
11-12	N.O.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9B
13-14	N.C.	SPARE		
14-15	N.O.	SPARE		

SI APERTURE CARD

Also Available On
Aperture Card

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
5-6	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9B1
9-10	N.O.	INDICATION		E28 SH 9B1
11-12	N.C.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.O.	RESET UNDERVOLTAGE AUX RELAYS		E28 SH 13B
10-20	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 13B

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9B
1-12	N.C.	NOT USED		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	TRIP TEMP LC 3T FEEDER	30212	E28 SH 12F
3-4	N.O.	TRIP SPARE BREAKER	30204	
5-6	N.C.	SPARE		
7-8	N.C.	SPARE		
9-10	N.O.	ANNUNCIATION		E28 SH 52A
11-12	N.O.	INTERLOCK FOR UNDESVOLTAGE CKT		E28 SH 13B

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
5-6	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9B1
9-10	N.O.	INDICATION		E28 SH 9B1
11-12	N.C.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.O.	RESET UNDERVOLTAGE AUX RELAYS		E28 SH 13B
10-20	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 13B

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH 9B
1-12	N.C.	NOT USED		

NOTES:

- ALL DRAWING REFERENCES ARE 5613
UNLESS NOTED OTHERWISE.

9206050138-10
NUCLEAR SAFETY RELATED

NOTE: THIS DWG IS MADE FROM:
(VENDOR) DWG. NO. _____
(A/E) DWG. NO. _____ REV. _____
FPL DWG NO. 5613-E-28, SH 13B1 REV. 1

REV. NO.	ELECT/CS	MECH.	CIVIL	PLANT FACILITIES
0	FSG	H/R	N/R	N/R
COORDINATION SIGN-OFF				

JOB No.
21701-523
PC/M 91-128

FPL	TURKEY POINT NUCLEAR UNIT 3	
	ELEMENTARY DIAGRAM	
ELECTRICAL AUXILIARIES METERING AND RELAYING 480V LOAD CENTER 3B		
BECHTEL		
DWG NO	SYS	
5613-E-28	006	
SHEET 13B1/91-128	REV	
	0	

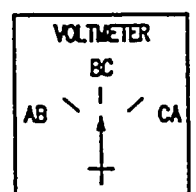
Signature Card
Also Available On
CARD
BOOKLET
21

Edmund Cury
Vice President (U)

CURT
WILLIAMS
21

3-27-92 ISSUED FOR CONSTRUCTION FOR PC/M 91-128. 0 REV DATE

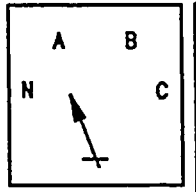
REVISION



VOLT-METER SWITCH
THREE POSITION
MAINTAINED
WESTINGHOUSE
TYPE W-2
TAG: VM SW

CONTACTS	POSITION			FUNCTION	DRAWING	
	AB	BC	CA			
A11-B11	X			ALIGN VM WITH # AB	E28	SH.13C
A12-B12		X		ALIGN VM WITH # BC	E28	SH.13C
A1-B1			X	ALIGN VM WITH # AC	E28	SH.13C
A5-B5	X			ALIGN VM WITH # AB	E28	SH.13C
A6-B6		X		ALIGN VM WITH # BC	E28	SH.13C
A7-B7			X	ALIGN VM WITH # AC	E28	SH.13C

X- DENOTES CONTACT CLOSED



GROUND DETECTOR
SWITCH
FOUR POSITION
MAINTAINED

CONTACTS	POSITION				FUNCTION	DRAWING	
	N	A	B	C			
A-A1		X			ALIGN GND MTR WITH # A	E28	SH.13C
B-B1				X	ALIGN GND MTR WITH # C	E28	SH.13C
C-C1	X				ALIGN GND MTR WITH NEU	E28	SH.13C
D-D1			X		ALIGN GND MTR WITH # B	E28	SH.13C

X- DENOTES CONTACT CLOSED

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	ANNUNCIATION		E28 SH.52A

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
10-11	N.C.	NOT USED		
11-12	N.O.	INITIATE UNDERVOLTAGE TRIP		E28 SH.9A
13-14	N.C.	SPARE		
14-15	N.O.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
10-11	N.C.	NOT USED		
11-12	N.O.	INITIATE UNDERVOLTAGE TRIP		E28 SH.9A
13-14	N.C.	SPARE		
14-15	N.O.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
3-4	N.O.	BKR CLOSE CKT	35007	E28 SH.12Z
5-6	N.C.	BKR AUTO XFER CKT	35007	E28 SH.12Z
7-8	N.C.	SPARE		
9-10	N.C.	ANNUNCIATION		E28 SH.52A
11-12	N.O.	BKR AUTO XFER CKT	35001	E28 SH.12YY

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
3-4	N.O.	BKR CLOSE CKT	35007	E28 SH.12Z
5-6	N.C.	BKR AUTO XFER CKT	35007	E28 SH.12Z
7-8	N.C.	SPARE		
9-10	N.C.	ANNUNCIATION		E28 SH.52A
11-12	N.O.	BKR AUTO XFER CKT	35001	E28 SH.12YY

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
5-6	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH.9A1
9-10	N.O.	INDICATION		E28 SH.9A1
11-12	N.C.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	U/V AUX. RELAY		E28 SH.13C
5-6	N.C.	NOT USED		
9-10	N.O.	U/V AUX. RELAY		E28 SH.13C
11-12	N.C.	NOT USED		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH.9A
1-12	N.C.	NOT USED		

NOTE: THIS DWG IS MADE FROM:
_____(VENDOR) DWG. NO. _____
_____(A/E) DWG. NO. _____ REV. _____
FPL DWG NO. 5613-E-28 SH.13C1 REV. 1

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
5-6	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH.9A1
9-10	N.O.	INDICATION		E28 SH.9A1
11-12	N.C.	SPARE		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	U/V AUX. RELAY		E28 SH.13C
5-6	N.C.	NOT USED		
9-10	N.O.	U/V AUX. RELAY		E28 SH.13C
11-12	N.C.	NOT USED		

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.C.	INITIATE UNDERVOLTAGE TRIP		E28 SH.9A
1-12	N.C.	NOT USED		

0	ESG	N/R	N/R	N/R
REV. NO.	ELECT/CS	MECH.	CIVIL	PLANT FACILITIES
COORDINATION SIGN-OFF				

NOTES:
1. ALL DRAWING REFERENCES ARE 5613 UNLESS NOTED OTHERWISE.

SI
APERTURE
CARD
Also Available On
Aperture Card

NUCLEAR SAFETY RELATED

TURKEY POINT NUCLEAR UNIT 3
ELEMENTARY DIAGRAM

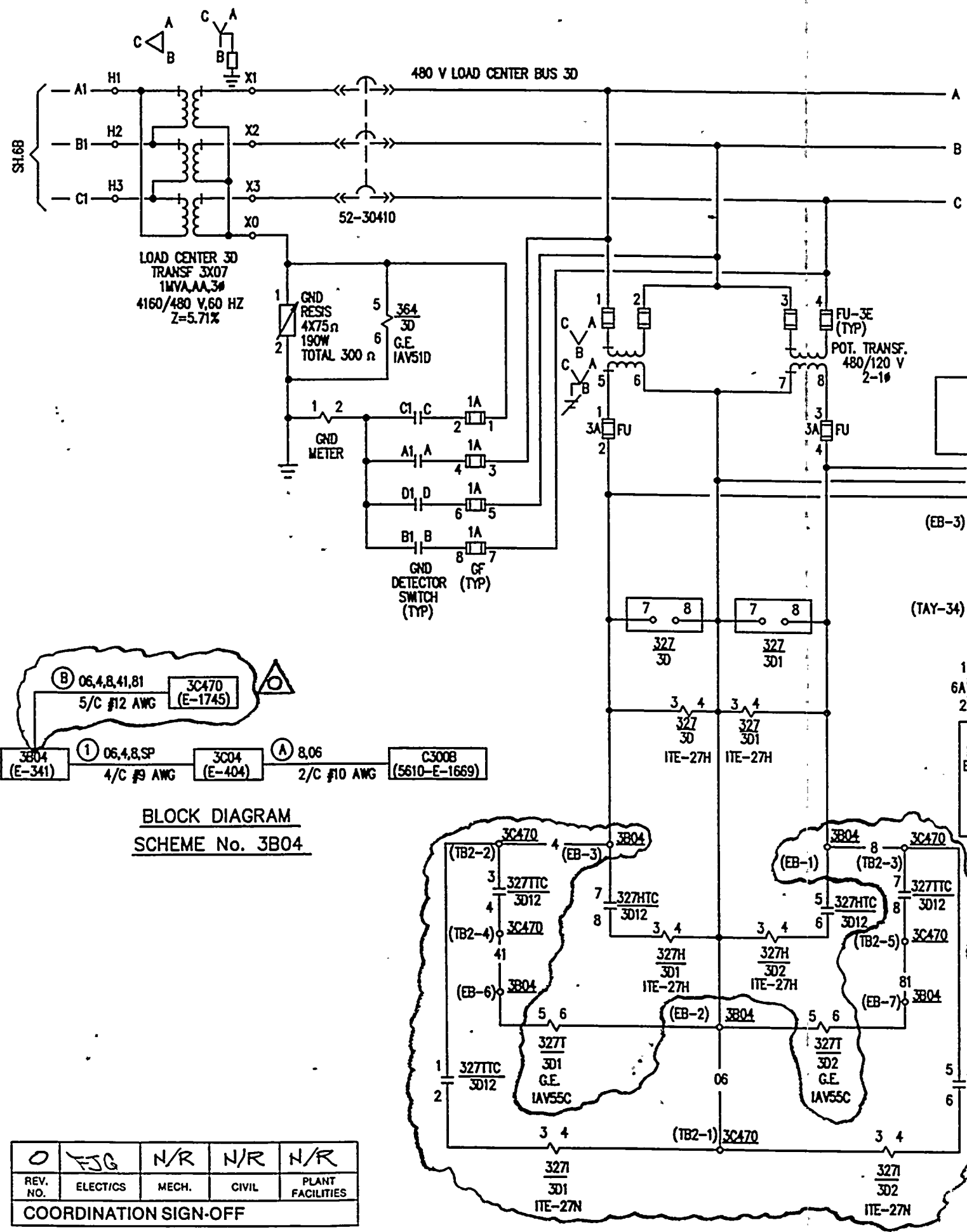
ELECTRICAL AUXILIARIES
METERING AND RELAYING
480V LOAD CENTER 3C

BECHTEL

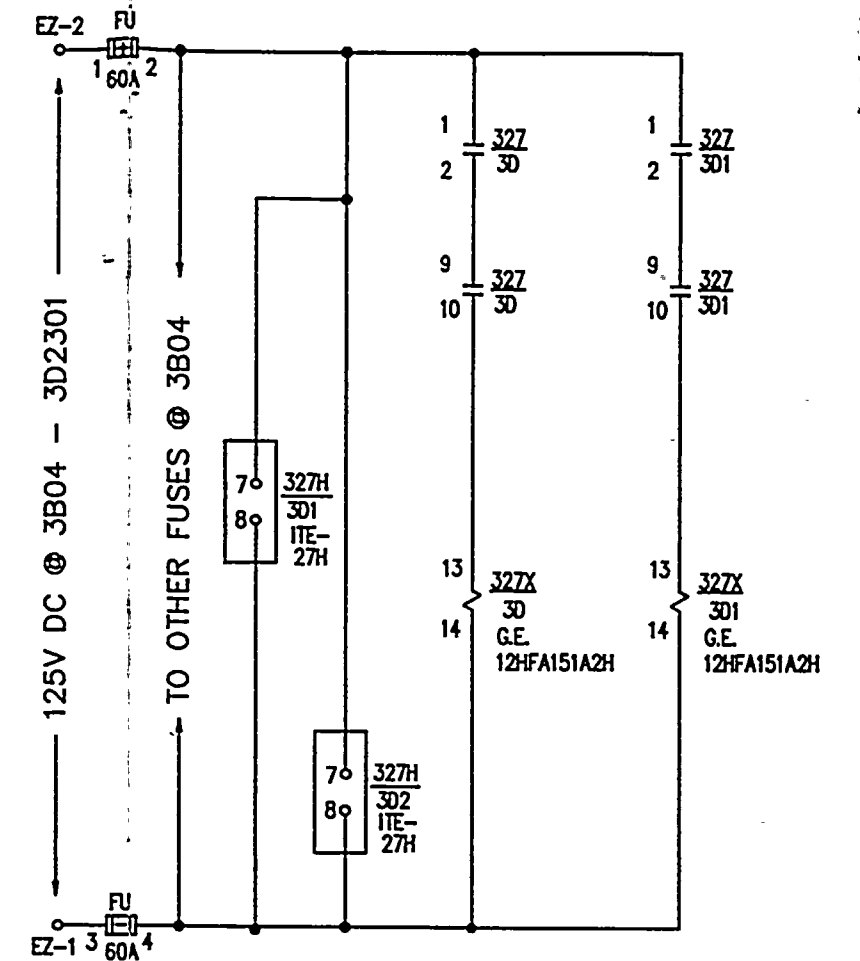
JOB No. 21701-523	DWG NO 5613-E-28	SYS 006
PC/M 91-128	SHEET 13C1/91-128	REV 0

9206050138-13 128D13C1.DWG

ABRAHAM LINCOLN
PRO-PEOPLE ON
CIVIL
DISOBEDIENCE
SI



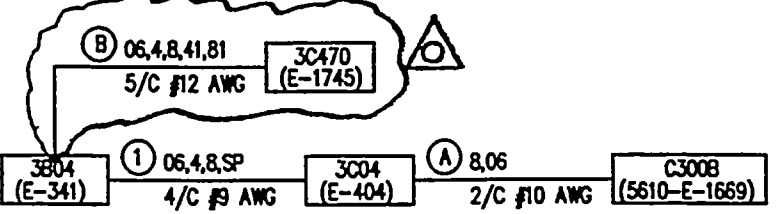
SI APERTURE CARD
Also Available On Aperture Card



- NOTES:**
1. ALL DRAWING REFERENCES ARE 5613 UNLESS NOTED OTHERWISE.
 2. DELETED.
 3. SEE SHEET 1301 FOR SWITCH DEVELOPMENT AND RELAY CONTACT ASSIGNMENT.
 4. FOR SWITCH DEVELOPMENT 327HTC/3D12 AND 327TTC/3D12 SEE SH.982.

NOTE: THIS DWG IS MADE FROM: _____ (VENDOR) DWG. NO. _____
 (A/E) DWG. NO. _____ REV. _____
 FPL DWG NO. 5613-E-28, SH.13D REV. 2

BLOCK DIAGRAM
SCHEME No. 3B04



REFERENCE DRAWINGS

5610-E-300A	EQUIPMENT NUMBER
5610-E-300B	STANDARDS DOC.
INTERNAL WIRING	
5613-E-9-4, SH.2A	3B04
5613-E-9-4, SH.3A	3B04
5613-M-301-65 SH.15	3C04
CONTROL POWER	
5613-E-12	3D2301

NUCLEAR SAFETY RELATED

FPL	TURKEY POINT NUCLEAR UNIT 3	
	ELEMENTARY DIAGRAM	
ELECTRICAL AUXILIARIES METERING AND RELAYING 480V LOAD CENTER 3D		
BECHTEL		
DWG NO	5613-E-28	
JOB No.	21701-523	
PC/M	91-128	SHEET 13D/91-128
SYS	006	REV 2
	0	

0	ESG	N/R	N/R	N/R
REV. NO.	ELECTICS	MECH.	CIVIL	PLANT FACILITIES
COORDINATION SIGN-OFF				

3-27-92 ISSUED FOR CONSTRUCTION FOR PC/M 91-128

REV DATE

0

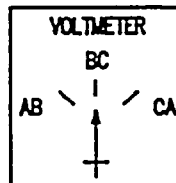
REVISION

BY

CH

APP

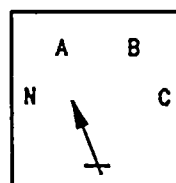
APP



VOLT METER SWITCH
THREE POSITION
MAINTAINED
WESTINGHOUSE
TYPE W-2
TAG: VM SW

CONTACTS	POSITION			FUNCTION	DRAWING	
	AB	BC	CA			
A11-B11	X			ALIGN VM WITH # AB	E-28	SH 13D
A12-B12		X		ALIGN VM WITH # BC	E-28	SH 13D
A1-B1			X	ALIGN VM WITH # AC	E-28	SH 13D
A5-B5	X			ALIGN VM WITH # AB	E-28	SH 13D
A6-B6		X		ALIGN VM WITH # BC	E-28	SH 13D
A7-B7			X	ALIGN VM WITH # AC	E-28	SH 13D

X- DENOTES CONTACT CLOSED



GROUND DETECTOR
SWITCH
FOUR POSITION
MAINTAINED

CONTACTS	POSITION				FUNCTION	DRAWING	
	N	A	B	C			
A-A1		X			ALIGN GND MTR WITH # A	E-28	SH 13D
B-B1				X	ALIGN GND MTR WITH # C	E-28	SH 13D
C-C1	X				ALIGN GND MTR WITH NEU	E-28	SH 13D
D-D1			X		ALIGN GND MTR WITH # B	E-28	SH 13D

X- DENOTES CONTACT CLOSED

364/3D

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	ANNUNCIATION		E-28 SH 52A

327/3D2

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
10-11	N.C.	NOT USED		
11-12	N.O.	INITIATE UNDERVOLTAGE TRIP		E-28 SH 9B
13-14	N.C.	SPARE		
14-15	N.O.	SPARE		

327/3D1

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
10-11	N.C.	NOT USED		
11-12	N.O.	INITIATE UNDERVOLTAGE TRIP		E-28 SH 9B
13-14	N.C.	SPARE		
14-15	N.O.	SPARE		

327X/3D

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.C.	TRIP NONVITAL MCC HV 3D FEEDER	30411	E-28 SH 12W
3-4	N.O.	BKR CLOSE CKT	35001	E-28 SH 12YY
5-6	N.C.	BKR AUTO TRANSFER CKT	35001	E-28 SH 12YY
7-8	N.C.	SPARE		
9-10	N.C.	ANNUNCIATION		E-28 SH 52A
11-12	N.O.	BKR AUTO TRANSFER CKT	35007	E-28 SH 12Z

327H/3D1

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
5-6	N.C.	INITIATE UNDERVOLTAGE TRIP		E-28 SH 9B1
9-10	N.O.	INDICATION		E-28 SH 9B1
11-12	N.C.	SPARE		

327/3D

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	UNDERVOLTAGE AUX RELAY		E-28 SH 13D
5-6	N.C.	NOT USED		
9-10	N.O.	UNDERVOLTAGE AUX RELAY		E-28 SH 13D
11-12	N.C.	NOT USED		

327T/3D1

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.C.	INITIATE UNDERVOLTAGE TRIP		E-28 SH 9B
1-12	N.C.	NOT USED		

327X/3D1

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	BKR CLOSE CKT	35001	E-28 SH 12YY
3-4	N.C.	TRIP NONVITAL MCC HV 3D FEEDER	30411	E-28 SH 12W
5-6	N.C.	BKR AUTO TRANSFER CKT	35001	E-28 SH 12YY
7-8	N.C.	SPARE		
9-10	N.C.	ANNUNCIATION		E-28 SH 52A
11-12	N.O.	BKR AUTO TRANSFER CKT	35007	E-28 SH 12Z

327H/3D2

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	SPARE		
5-6	N.C.	INITIATE UNDERVOLTAGE TRIP		E-28 SH 9B1
9-10	N.O.	INDICATION		E-28 SH 9B1
11-12	N.C.	SPARE		

327/3D1

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-2	N.O.	UNDERVOLTAGE AUX RELAY		E-28 SH 13D
5-6	N.C.	NOT USED		
9-10	N.O.	UNDERVOLTAGE AUX RELAY		E-28 SH 13D
11-12	N.C.	NOT USED		

327T/3D2

CONT.	POS.	DESCRIPTION	BREAKER	DRAWING
1-11	N.C.	INITIATE UNDERVOLTAGE TRIP		E-28 SH 9B
1-12	N.C.	NOT USED		

NOTES:

1. ALL DRAWING REFERENCES ARE 5613 UNLESS NOTED OTHERWISE.

SI
APERTURE
CARD

Also Available On
Aperture Card

REV. NO.	ELECT/CS	MECH.	CIVIL	PLANT FACILITIES
0	FIS	N/R	N/R	N/R
COORDINATION SIGN-OFF				

NOTE: THIS DWG IS MADE FROM:
(VENDOR) DWG. NO. _____
(A/E) DWG. NO. _____ REV. _____
FPL DWG NO. 5613-E-28, SH 13D1 REV. 1

NUCLEAR SAFETY RELATED

FPL	TURKEY POINT NUCLEAR UNIT 3	
	ELEMENTARY DIAGRAM	
ELECTRICAL AUXILIARIES METERING AND RELAYING 480V LOAD CENTER 3D		
BECHTEL		
JOB No. 21701-523	DWG NO 5613-E-28	SYS 006
PC/M 91-128	SHEET 13D1/91-128	REV. 0

9206050138-15

128D13D1.DWG

SECRET