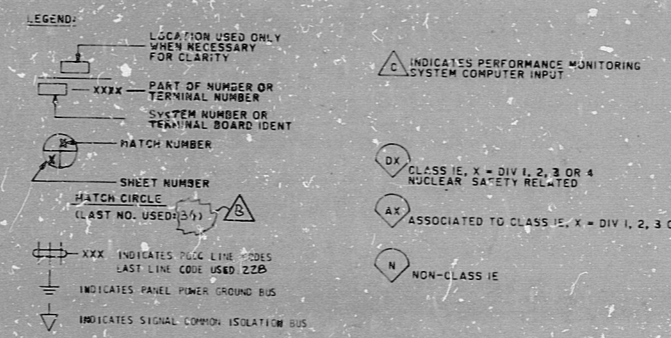
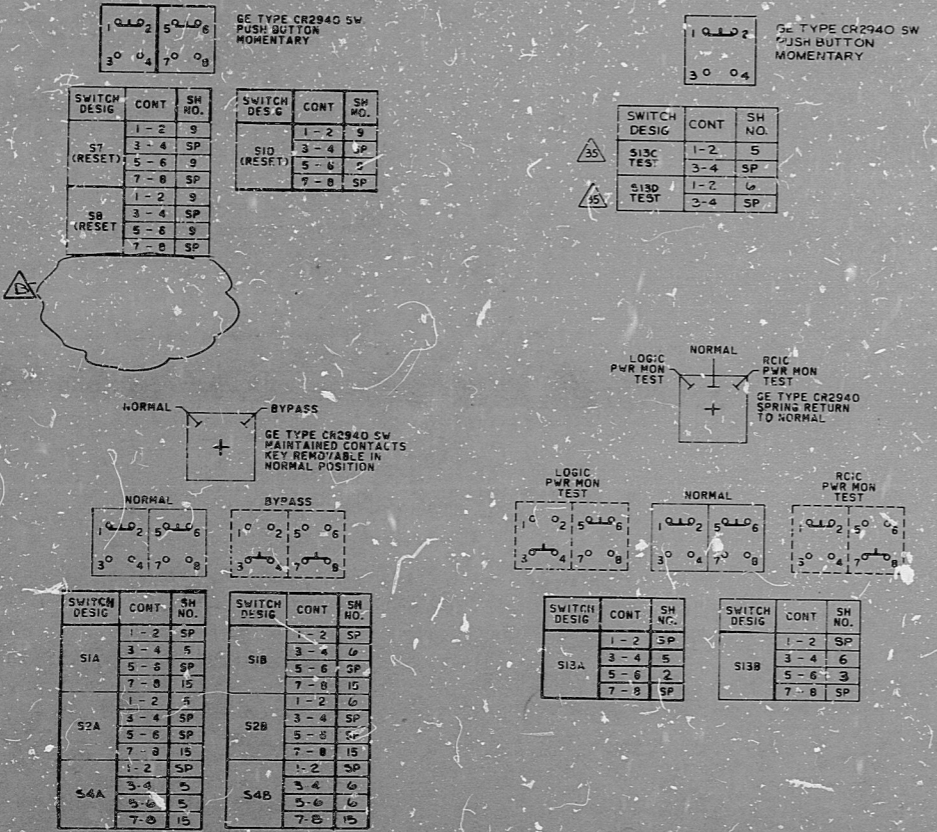


AREA MONITORED	TABLE NO. 1				TABLE NO. 2			
	AMBIENT TEMPERATURE				DIFFERENTIAL TEMPERATURE			
TE	RT	RT	RT	TE	RT	RT	RT	
STEAM PIPE TUNNEL	N050A	N050B	1	1	N023A	N023B	N023C	1
DRYWELL AMBIENT	N047A	N047B	2	2				
DRYWELL AMBIENT	N047C	N047D	3	3				
DRYWELL AMBIENT	N047E	N047F	4	4				
DRYWELL AMBIENT	N047G	N047H	5	5				
VALV. EQUIP. AREA 1	N048A	N048B	6	6	N024A	N024B	N024C	2
VALV. EQUIP. AREA 2	N048C	N048D	7	7	N024D	N024E	N024F	3
VALV. EQUIP. AREA 3	N048E	N048F	8	8				
VALV. EQUIP. AREA 4	N048G	N048H	9	9				
VALV. EQUIP. AREA 5	N048I	N048J	10	10				
VALV. EQUIP. AREA 6	N048K	N048L	11	11				
VALV. EQUIP. AREA 7	N048M	N048N	12	12				
VALV. EQUIP. AREA 8	N048O	N048P	13	13				
VALV. EQUIP. AREA 9	N048Q	N048R	14	14				
VALV. EQUIP. AREA 10	N048S	N048T	15	15				
VALV. EQUIP. AREA 11	N048U	N048V	16	16				
VALV. EQUIP. AREA 12	N048W	N048X	17	17				
VALV. EQUIP. AREA 13	N048Y	N048Z	18	18				
VALV. EQUIP. AREA 14	N048AA	N048AB	19	19				
VALV. EQUIP. AREA 15	N048AC	N048AD	20	20				
VALV. EQUIP. AREA 16	N048AE	N048AF	21	21				
VALV. EQUIP. AREA 17	N048AG	N048AH	22	22				
VALV. EQUIP. AREA 18	N048AI	N048AJ	23	23				
VALV. EQUIP. AREA 19	N048AK	N048AL	24	24				

- NOTES:
1. WIRED THROUGH 1/4" 100% COPPER CONSTANTAN EXTENSION WIRE THAT TX. TOTAL LENGTH SHOULD BE 10 FT. MIN. TO SUPPLY 20 FT. MIN. EFFECTIVE COVERAGE WITH STANDARD 1/4" 100% COPPER CONSTANTAN WIRE. (SEE FIG. 1)
 2. ROUTE ALL THERMOCOUPLES SEPARATELY FROM PWR. CABLES.
 3. DUAL TYPE THERMOCOUPLES REQUIRED.
 4. CONNECT THERMOCOUPLE OR WIRE DIRECT TO INSTRUMENT.
 5. INSTRUMENT PROCESS INSTRUMENTATION (IPI) SIGNAL LEADS SHALL BE BUNDLED AND SHIELDED SEPARATELY FROM AC & DC POWER WIRING.
 6. THERMOCOUPLE AND GROUND WIRING NOT PERMITTED TO AN INSTRUMENT TO BE CONNECTED TO TERMINAL BOARD.
 7. UNLESS OTHERWISE INDICATED, THE FOLLOWING REFERRED CONNECTIONS SHOWN IN DIAGRAM ARE PREFIXED WITH:

REF. DESIG.	NAME
RXX	RESISTOR
RYX	RELAY
KXX	KEY
SXX	SWITCH
TX	TRANSFORMER
UBXX	UNITS
TXXX	TRANSFORMER
XX	WIRE
 8. SEE FIG. 1, SH. 2 FOR POWER DISTRIBUTION.
 9. SEE FIG. 2, SH. 3 FOR POWER DISTRIBUTION.
 10. ALL RECORDER & TEMPERATURE ELEMENTS ARE PREFIXED WITH 101.
 11. MODULES PLUS INSTRUMENT POWER CONNECTION UNIT NUMBER 1.
 12. SEE FIG. 4, SH. 3 FOR POWER DISTRIBUTION.
 13. SEE FIG. 5, SH. 5 FOR POWER DISTRIBUTION.
 14. MODULES PLUS INSTRUMENT POWER CONNECTION UNIT NUMBER 2.
 15. SEE FIG. 3, SH. 2 FOR POWER DISTRIBUTION.
 16. DRYWELL CONSTANTAN THERMOCOUPLES AND EXTENSION WIRE TYPE EX SHALL BE USED WHEN SPECIFIED BY CUSTOMERS.
 17. REMOVED.
 18. REMOVED.
 19. SUPPLIED FOR POWER GENERATION CONTROL COMPLEX (PGCC) PLANTS ONLY. SEE HIS-2010 CONTROL ROOM INTERFACE CONTROL DOCUMENT (ICD) FOR LOCATION BY LOCATION.
 20. TYPICAL CONTACTS REQUIRED FROM THE AC SUPPLIED RADWASTE SUPP. SYS. RADWASTE SUPP. SYSTEMS MAY DIFFER IN NOMENCLATURE AND IDENT. BUT MUST SUPPLY THE SAME FUNCTION.
 21. ANNUNCIATOR TO ALARM ON OPEN CONTACT.
 22. THIS POWER MONITOR AND TEST FUNCTION MUST BE WIRED FURTHEST FROM THIS POWER SOURCE IN ORDER TO FULFILL ITS MONITORING FUNCTION.
 23. THESE SIGNAL LINES MAY BE ROUTED IN THE SAME CONDUIT.
 24. FOR EQUIPMENT SUPPLY REFER TO SYSTEM MPL.
 25. EQUIPMENT INTERFACES VALID FOR HIS-P632 MOUNTING ONLY. PER CUSTOMER REQUEST, THIS EQUIPMENT WILL BE PART OF GROUP SHIPMENT E31-5110 FOR CUSTOMER PANEL MOUNTING. FOR NUCLEAR CUSTOMERS ONLY.
 26. REMOVED.
 27. POWER TO BE DISCONNECTED ON LOCAL SIGNAL.
 28. REMOVED.
 29. INTERFACES VALID FOR GE SUPPLIED SYSTEMS ONLY.
 30. FOR RELAY PLANTS ONLY.
 31. FOR MORE SENSITIVE SUPP. MONITOR SUBSYSTEM CUSTOMERS ONLY. REFER TO SYSTEM MPL.
 32. REMOVED.
 33. REMOVED.
 34. EQUIPMENT SUPPLIED AS PART OF HIS-P671 OR HIS-P672.
 35. ALPHABETICAL WIRE MARKS ARE PREFIXED BY: SUB SYSTEM NO., SHEET & LINE NO. (EX. E31A0601A).
 36. POTENTIAL WIRE MARKS ARE PREFIXED BY: SUB SYSTEM NO., & LINE NO. (EX. E31A0601A).
 37. FOR GRAPHIC STANDARDS REFER TO DWG. B-208-001.
 38. FOR ANNUNCIATOR CIRCUITS, LINE CODES AND TERMINATIONS FOR THE ANNUNCIATOR LOGIC CABINET HIS-P630 AND ANNUNCIATOR WINDOWS SEE BOP SYSTEM RA1.



- REFERENCE DOCUMENTS:
1. E32-1050
 2. E41-1053
 3. E51-1050
 4. A02-0010
 5. E31-1010
 6. E21-1090
 7. BY AE
 8. E25-1050
 9. E31-4,30
 10. E02-4050
 11. E31-1070
 12. E32-1050
 13. E41-1050
 14. E43-1049
 15. E31-1057
 16. E31-1057
 17. E31-1050
 18. E31-1050
 19. HIS-2010
- RESIDUAL HEAT REMO. SYS. ELEM. DIAG. (E32A)
 FUEL POOL FLOW & CLEANUP SYS. ELEM. DIAG. (E41A)
 REAC. CORE SYS. ELEM. DIAG. (E31A)
 SPECIAL WIRE & CABLE SPECS.
 LEAK DETECTION SYS. IPI
 NUC. ST. SUPPLY SYS. ELEM. DIAG. (E21A)
 RADWASTE SUPP. SYSTEM ELEM. DIAG.
 REACTOR HT. CLEANUP SYS. ELEM. DIAG. (E22A)
 PROCESS COMPUTER I/O LISTING
 ELECTRICAL SEPARATION SPEC.
 STARTUP PANEL WIRING NON SYS. ELEM. DIAG. (E31A)
 REACTOR BEING SYS. ELEM. DIAG. (E33A)
 STANDBY LIQUID COOLING SYS. ELEM. DIAG. (E34A)
 GAS SAMPLING CONTROL SCHEM. DIAG.
 AIR PARTICULATE SCHEM. PANEL SCHEM. DIAG.
 CONTROL ROOM DRIVE AND PWR. CABLE DIAG. (E11A)
 REDUCTION SHUTDOWN ELEM. (ELEM. DIAG.) (E61A)
 CONTROL ROOM - INTERFACE CONT. DIAG.

PRO APERTURE CARD

THE CLEVELAND ELECTRIC ILLUMINATING CO.
 PERRY NUCLEAR POWER PLANT UNIT 1
 ELECTRICAL-ELEMENTARY DIAGRAM

REV. MADE	CHKD	APPROVALS	DATE	REV. MADE	CHKD	APPROVALS	DATE	REV. MADE	CHKD	APPROVALS	DATE	REV. MADE	CHKD	APPROVALS	DATE	REV. MADE	CHKD	APPROVALS	DATE	REV. MADE	CHKD	APPROVALS	DATE

REVISED AS PER GE ADDED NOTE 39
 DWG REV'S BY: AM, PLC, RAN, 11/82
 AYZ, P, DEG, RAN, 10-1-80

READING PA: G44549-000 JGS RAN DEG JMS 3/6/78 04 4549 B-208-070 E31 A01 B

WORK ORDER MADE CHKD. DR. APP. ENGR. APP. DATE

DRAWING NUMBER SYSTEM SH. NO. REV.

ELEM DIAG IE31A NOTES REFS SW DEVL

RIDS

8212160599

