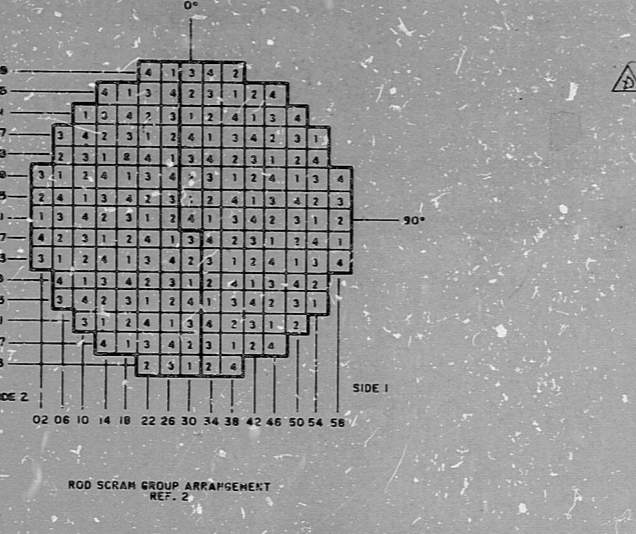
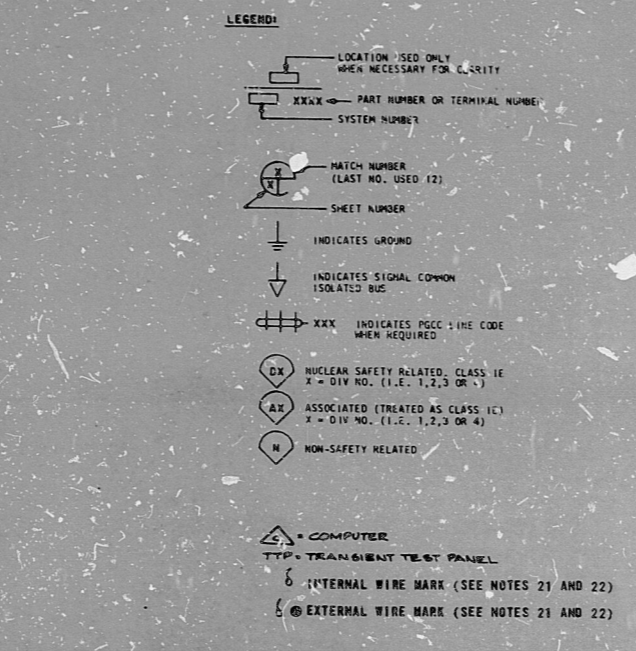


REF DESIG	DEVICE	VALVE AND CONTROL TABULATION	FUNCTION	SWITCH	INDICATOR LAMPS	LOCATION	SH
IC11-F010	SCRAM DISCHARGE VALVE ISOLATION VALVE	X	X			HIS-P600-HB	11
IC11-F011	SCRAM DISCHARGE VALVE ISOLATION VALVE	X	X			HIS-P600-HB	11
	TRIP ACTUATOR LOGIC				X (WENT)		10
	TRIP ACTUATOR LOGIC				X (WENT)		11
	TRIP ACTUATOR LOGIC				X (WENT)		12
	TRIP ACTUATOR LOGIC				X (WENT)		13
	TRIP ACTUATOR LOGIC				X (WENT)		14
	TRIP ACTUATOR LOGIC				X (WENT)		15
	TRIP ACTUATOR LOGIC				X (WENT)		16
	TRIP ACTUATOR LOGIC				X (WENT)		17
	TRIP ACTUATOR LOGIC				X (WENT)		18
	TRIP ACTUATOR LOGIC				X (WENT)		19
	TRIP ACTUATOR LOGIC				X (WENT)		20
	TRIP ACTUATOR LOGIC				X (WENT)		21
	TRIP ACTUATOR LOGIC				X (WENT)		22
	TRIP ACTUATOR LOGIC				X (WENT)		23
	TRIP ACTUATOR LOGIC				X (WENT)		24
	TRIP ACTUATOR LOGIC				X (WENT)		25
	TRIP ACTUATOR LOGIC				X (WENT)		26
	TRIP ACTUATOR LOGIC				X (WENT)		27
	TRIP ACTUATOR LOGIC				X (WENT)		28
	TRIP ACTUATOR LOGIC				X (WENT)		29
	TRIP ACTUATOR LOGIC				X (WENT)		30
	TRIP ACTUATOR LOGIC				X (WENT)		31
	TRIP ACTUATOR LOGIC				X (WENT)		32
	TRIP ACTUATOR LOGIC				X (WENT)		33
	TRIP ACTUATOR LOGIC				X (WENT)		34
	TRIP ACTUATOR LOGIC				X (WENT)		35
	TRIP ACTUATOR LOGIC				X (WENT)		36
	TRIP ACTUATOR LOGIC				X (WENT)		37
	TRIP ACTUATOR LOGIC				X (WENT)		38
	TRIP ACTUATOR LOGIC				X (WENT)		39
	TRIP ACTUATOR LOGIC				X (WENT)		40
	TRIP ACTUATOR LOGIC				X (WENT)		41
	TRIP ACTUATOR LOGIC				X (WENT)		42
	TRIP ACTUATOR LOGIC				X (WENT)		43
	TRIP ACTUATOR LOGIC				X (WENT)		44
	TRIP ACTUATOR LOGIC				X (WENT)		45
	TRIP ACTUATOR LOGIC				X (WENT)		46
	TRIP ACTUATOR LOGIC				X (WENT)		47
	TRIP ACTUATOR LOGIC				X (WENT)		48
	TRIP ACTUATOR LOGIC				X (WENT)		49
	TRIP ACTUATOR LOGIC				X (WENT)		50
	TRIP ACTUATOR LOGIC				X (WENT)		51
	TRIP ACTUATOR LOGIC				X (WENT)		52
	TRIP ACTUATOR LOGIC				X (WENT)		53
	TRIP ACTUATOR LOGIC				X (WENT)		54
	TRIP ACTUATOR LOGIC				X (WENT)		55
	TRIP ACTUATOR LOGIC				X (WENT)		56
	TRIP ACTUATOR LOGIC				X (WENT)		57
	TRIP ACTUATOR LOGIC				X (WENT)		58
	TRIP ACTUATOR LOGIC				X (WENT)		59
	TRIP ACTUATOR LOGIC				X (WENT)		60
	TRIP ACTUATOR LOGIC				X (WENT)		61
	TRIP ACTUATOR LOGIC				X (WENT)		62
	TRIP ACTUATOR LOGIC				X (WENT)		63
	TRIP ACTUATOR LOGIC				X (WENT)		64
	TRIP ACTUATOR LOGIC				X (WENT)		65
	TRIP ACTUATOR LOGIC				X (WENT)		66
	TRIP ACTUATOR LOGIC				X (WENT)		67
	TRIP ACTUATOR LOGIC				X (WENT)		68
	TRIP ACTUATOR LOGIC				X (WENT)		69
	TRIP ACTUATOR LOGIC				X (WENT)		70
	TRIP ACTUATOR LOGIC				X (WENT)		71
	TRIP ACTUATOR LOGIC				X (WENT)		72
	TRIP ACTUATOR LOGIC				X (WENT)		73
	TRIP ACTUATOR LOGIC				X (WENT)		74
	TRIP ACTUATOR LOGIC				X (WENT)		75
	TRIP ACTUATOR LOGIC				X (WENT)		76
	TRIP ACTUATOR LOGIC				X (WENT)		77
	TRIP ACTUATOR LOGIC				X (WENT)		78
	TRIP ACTUATOR LOGIC				X (WENT)		79
	TRIP ACTUATOR LOGIC				X (WENT)		80
	TRIP ACTUATOR LOGIC				X (WENT)		81
	TRIP ACTUATOR LOGIC				X (WENT)		82
	TRIP ACTUATOR LOGIC				X (WENT)		83
	TRIP ACTUATOR LOGIC				X (WENT)		84
	TRIP ACTUATOR LOGIC				X (WENT)		85
	TRIP ACTUATOR LOGIC				X (WENT)		86
	TRIP ACTUATOR LOGIC				X (WENT)		87
	TRIP ACTUATOR LOGIC				X (WENT)		88
	TRIP ACTUATOR LOGIC				X (WENT)		89
	TRIP ACTUATOR LOGIC				X (WENT)		90
	TRIP ACTUATOR LOGIC				X (WENT)		91
	TRIP ACTUATOR LOGIC				X (WENT)		92
	TRIP ACTUATOR LOGIC				X (WENT)		93
	TRIP ACTUATOR LOGIC				X (WENT)		94
	TRIP ACTUATOR LOGIC				X (WENT)		95
	TRIP ACTUATOR LOGIC				X (WENT)		96
	TRIP ACTUATOR LOGIC				X (WENT)		97
	TRIP ACTUATOR LOGIC				X (WENT)		98
	TRIP ACTUATOR LOGIC				X (WENT)		99
	TRIP ACTUATOR LOGIC				X (WENT)		100



HYDRAULIC CONTROL UNITS REACTOR SIDE 2				HYDRAULIC CONTROL UNITS REACTOR SIDE 1			
GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 1	GROUP 2	GROUP 3	GROUP 4
02-31	02-35	02-23	02-27	30-35	30-39	30-43	30-31
06-23	06-27	02-39	06-19	31-51	30-55	30-59	30-47
06-39	06-43	06-15	06-25	34-15	34-03	34-07	34-11
10-19	10-23	06-31	10-15	34-31	34-19	34-23	34-27
10-35	10-39	06-47	10-31	34-47	34-35	34-39	34-43
10-51	14-17	10-11	10-47	38-07	34-51	34-55	34-59
14-11	14-31	10-27	14-07	38-23	34-11	38-15	38-03
14-27	14-47	10-43	14-22	38-39	34-27	38-31	38-19
14-43	18-17	14-19	14-39	38-55	38-43	38-47	38-35
18-07	18-27	14-35	14-55	42-19	38-59	42-11	38-51
18-23	18-43	14-51	18-19	42-35	42-07	42-27	42-15
18-39	22-03	18-15	18-35	42-51	42-23	42-43	42-31
18-55	22-19	18-31	18-51	46-11	42-39	46-19	42-47
22-15	22-35	18-47	22-11	46-27	42-55	46-35	46-07
22-31	22-51	22-07	22-27	46-43	45-15	46-51	46-23
22-47	26-15	22-23	22-43	50-23	40-31	50-15	46-39
26-11	26-31	22-39	22-59	50-39	46-47	50-31	46-55
26-27	26-47	22-55	26-07	54-15	50-19	50-47	50-19
26-43	30-07	26-03	26-23	54-31	50-27	54-23	50-35
26-59	30-23	26-19	26-39	54-47	50-43	54-39	50-51
30-03		26-35	26-55	58-27	54-13	58-35	54-27
30-19		30-11	30-15		54-35	58-23	54-43
		30-27			58-31		58-39

LEGEND - (CONTINUED)

1113-P600 ANNUNCIATOR A SEQUENCE OF EVENTS RECORDER LOGIC PANEL
 1113-P601 DIVISION 1 NEUTRON POWER AND RADIATION INSTRUMENT PANEL
 1113-P602 DIVISION 2 NEUTRON POWER AND RADIATION INSTRUMENT PANEL
 1113-P603 DIVISION 3 NEUTRON POWER AND RADIATION INSTRUMENT PANEL
 1113-P604 DIVISION 4 NEUTRON POWER AND RADIATION INSTRUMENT PANEL
 1113-P605 GMIT CONTROL CONSOLE
 1113-P606 DIVISION 1 RPS INSTRUMENT AND AUXILIARY RELAY PANEL
 1113-P607 DIVISION 2 RPS INSTRUMENT AND AUXILIARY RELAY PANEL
 1113-P608 DIVISION 3 RPS INSTRUMENT AND AUXILIARY RELAY PANEL
 1113-P609 DIVISION 4 RPS INSTRUMENT AND AUXILIARY RELAY PANEL
 1113-P701 PCC TERMINATION CABINET
 1113-P712 PCC TERMINATION CABINET
 1113-P713 PCC TERMINATION CABINET
 1113-P717 PCC TERMINATION CABINET
 1122-P004 REACTOR VESSEL LEVEL ANN PRESSURE LOCAL PANEL A
 1122-P005 REACTOR VESSEL LEVEL ANN PRESSURE LOCAL PANEL C
 1122-P006 REACTOR VESSEL LEVEL AND PRESSURE LOCAL PANEL D
 1122-P007 REACTOR VESSEL LEVEL AND PRESSURE LOCAL PANEL B

NOTES:

- ALL CABLE AND PANEL WIRING TO BE SEPARATED PER REF. DOC 12.
- ANNUNCIATORS TRIP ON CIRCUIT CLOSURE.
- PARTS 1113 THRU 1118 ARE CURRENT LIMITING RESISTORS, ALSO INDICATED BY REFERENCE TO THE REACTOR PROTECTION SYSTEM CONTRACTOR'S WORK IN EACH GROUP SYSTEMS.
- NOT PART OF THE REACTOR PROTECTION SYS. REF. DOC 12 DOES NOT APPLY.
- CONDUIT WITHIN THE PENETRATION CHAMBER "A" AND "B" OR "C" ARE WITHIN THE SAME PENETRATION, BUT IN DIFFERENT CONDUITS.
- REMOVED.
- XXX-XXX THE CONTROL ROD DESIGNATION SYMBOL IS USED WHERE MORE THAN ONE ROD IS REPRESENTED.
- PROVIDE PHYSICAL ISOLATION AND SEPARATION OF WIRING AND DEVICES AS APPROPRIATE TO PRECLUDE THE POSSIBILITY OF A SINGLE COMPONENT FAILURE (CLOSURE, OPENING, OR SHORT) FROM PREVENTING AUTOMATIC SCRAM. SEE REF. DOC 10 AND 12.
- CONDUIT FROM CIRCUIT DEVICE TO TERMINAL, DO NOT USE DIFFERENT DIVISIONS ON THE SAME CONDUIT. TERMINAL MUST COMPLY WITH REF. DOC 12, FIG. 6.3.1.1. ALL REACTOR PROTECTION SWITCHES WIRING IN THE PCC MUST BE SEPARATED FROM THE PCC BUS, UNLESS OTHERWISE INDICATED ON THEIR DIVISIONS.
- UNLESS OTHERWISE INDICATED, THE FOLLOWING REFERENCE DESIGNATIONS SHOWN ON THIS DIAGRAM ARE DEFINED WITHIN THE FOLLOWING TABLE:

REF. DESIG.	NAME	REF. DESIG.	NAME
XXX	RELAY	XXX	LINE CODES (SEE LEGEND)
XXX	SWITCH	XXX	JUNCTION BOX
XXX	FUSE	XXX	CARD FILE
XXX	CIRCUIT BREAKER	XXX	CALIBRATION UNIT
TRXX	TERMINAL	TRXX	INDUCER
TRXX	TRANSCIENT TEST JACK	TRXX	

- STATUS LIGHTS ARE PPD NO. 051603 (20 VOLT MED. LIGHTS)
- THE LOADS SHOWN ARE ESTIMATED, NOT MEASURED QUANTITIES. AC LOADS ARE BASED ON 60 HZ. (SS = STEADY STATE, T = TRANSIENT).
- LIGHTS CAPABLE OF 200% OVER-VOLTAGE.
- INDIVIDUAL GROUND WIRES TO BE RUN FROM TERMINALS 3 AND 4 TO COMMON BUS BAR. TERMINALS 1, 2, 5, 6, 7 FOR EACH TERMINAL BOARD ARE PROVIDED.
- REMOVED.
- THE SCRAM CONTACTORS SHALL BE ENCLOSED IN METALLIC BOXES AND INTERCONNECTING CABLES ROUTED IN METALLIC CONDUIT. THE A AND B SUBSYSTEMS SHALL BE SEPARATED FROM EACH OTHER AND FROM THE C AND D SUBSYSTEMS.
- INDICATING LIGHTS ON HIS-P601, P602, P603, & P604 ARE ETC. ALL OTHERS ARE PPD NO. 051603 (LAMP) AND SCRAM CONTACTORS (MOTOR) LAMPLESS OVERSHOOT. ALL LIGHTS ARE SUPPLIED WITH FUSES.
- ESSENTIAL POWER WIRING SHALL BE SEPARATED FROM ALL OTHER WIRING BY 6 INCH SEPARATION OR METALLIC CONDUIT.
- NON-ESSENTIAL RPS MC SET POWER WIRING SHALL BE SEPARATED FROM OTHER WIRING BY 6 INCH SEPARATION OR METALLIC CONDUIT.
- HFA RELAYS FOR RECIRC PUMP TRIP MUST BE INDIVIDUALLY TESTED BY QUALITY ASSURANCE FOR THE TRIP FUNCTION (WELDING) TO ASSURE THAT THE LOGIC DELAY DOES NOT EXCEED 20 MILLISECONDS.
- ALPHABETICAL WIRE MARKS ARE PREFIXED BY SUBSYSTEM, SHEET AND LINE NO. (EXAMPLE: C71A0401A).
- POTENTIAL WIRE MARKS ARE PREFIXED BY SUBSYSTEM AND SHEET NO. (EXAMPLE: C71A04X1).
- DEVIC DESIGNATIONS ARE PREFIXED BY UNIT AND SYSTEM NO. (EXAMPLE: 1113-P601).
- FOR GRAPHIC STANDARDS, REFER TO DSR 8-208-001.
- FOR ANNUNCIATOR CIRCUITS LINE CODES AND TERMINATIONS FOR THE ANNUNCIATORS LOGIC CABINET HIS-P600 AND ANNUNCIATOR WINDOWS SEE BOP SYSTEM R61.

THE CLEVELAND ELECTRIC ILLUMINATING CO.

PERRY NUCLEAR POWER PLANT UNIT 1

ELECTRICAL-ELEMENTARY DIAGRAM

REACTOR PROTECTION SYSTEM

NOTES, REFERENCES, VALVE TABULATIONS AND ROD SCRAM GROUP ARRANGEMENTS

REVISED PER GE DRWG REV. 8 AND REV. 3

UPDATED GE TITLE BLOCK

ADDED NOTE 25

REVISED VALVE AND CONTROL TABULATIONS

READING PA. 644548-000

ENGINEERS AND CONSULTANTS

DATE RELEASED FOR ENGR. 6/30/77

DATE 6/30/77

WORK ORDER MADE CHKD. DR. APP. 6/30/77

DRAWING NUMBER 04 4540 B-208-040 C71 A01 D

SYSTEM SH. NO. REV.

ELEM DIAG IC71A NOTES, TABS, RCD ABC

11
11
8.5"
11"
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