

REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED
---	RELEASED ON C/N 83347	5/8/81	27
A	C/N 83429 REVISION, NO CHANGE	6/16/81	27
	AS SHIPPED HOPE CREEK 11-1-84		
B	C/N 87158 NOTE 5 E4, E15 WAS #4, #15 P1 PIN 66 WAS P1 PINS ZONE B5	8/27/87	127

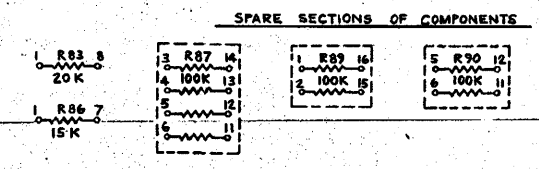
ENGINEERING DOCUMENT CONTROL
APR 12 1988
RECEIVED

THE TOLEDO EDISON COMPANY
NUCLEAR FACILITY ENGINEERING
DOCUMENT REVIEW

- WORK MAY PROCEED.
- REVISION AND REWORK MAY PROCEED SUBJECT TO INCORPORATION OF CHANGES INDICATED.
- REVISION AND REWORK MAY NOT PROCEED. REVIEW NOT REQUIRED.
- REVISION AND REWORK MAY NOT PROCEED. PERMISSION TO PROCEED ON THIS DOCUMENT DOES NOT RELIEVE SUPPLIER FROM FULL COMPLIANCE WITH P.O. CONTRACT SPECIFICATION REQUIREMENTS.

BY: *[Signature]*
DATE: 5-17-88
CONTROL NUMBER:

- NOTES:
- UNLESS OTHERWISE SPECIFIED:
 - ALL DISCRETE RESISTORS ARE $\pm 5\%$ TOLERANCE AND 1/4 WATT.
 - ALL RESISTOR NETWORKS ARE $\pm 2\%$ TOLERANCE, 140 MW MAX., EACH RESISTOR.
 - ALL CAPACITORS ARE RATED IN MICROFARADS AND $\pm 20\%$ TOLERANCE.
 - ALL ZENER VOLTAGES ARE $\pm 5\%$.
 - SEE "SPARE SECTIONS OF COMPONENTS" FOR UNUSED SPARES.
 - SEE PARTS LIST PLAND-1 FOR COMPLETE PARTS DESCRIPTION.
 - THE NONFUNCTIONAL SHOWN WITHIN ARE SILK SCREENED ON P-W-B.
 - LAST REF. DESIGNATION USED: C66, Q20, CR24, R101, U10, P1, E28. DESIGNATION NOT USED: R61 THROUGH R80, C33 THROUGH C56, E3, E4, E15, E16, C1, C2.
 - ALL STRESS VALUES ARE SHOWN IN PARENTHESES. STRESS VALUES LESS THAN 50 MW OR LESS THAN 15V ARE NOT SHOWN. STRESS VALUES SHOWN IN PARENTHESES IN CKT # ARE TYPICAL FOR THE CORRESPONDING COMPONENTS OF CKT # THROUGH #10.
 - CKT #1 THROUGH CKT #10 ARE THE SWITCH READERS.
 - PIN #1 OF 51P'S R81 TO R86, CONNECTED TO +28V OR +48V D.C.
 - CIRCUITS #1 THROUGH #10 WILL TOLERATE 12V RMS, 60 Hz SOURCE IN SERIES WITH CLOSED CONTACTS AND 12V RMS, 60 Hz IN PARALLEL WITH OPEN CONTACTS.



E-30AQ-021-1

REV. NO.	ITEM NO.	NONNOMENCLATURE OR DESCRIPTION	QTY	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	REMARKS
LIST OF MATERIAL							
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .001" = .0254 MM .005" = .1270 MM .010" = .2540 MM .020" = .5080 MM .030" = .7620 MM .040" = 1.0160 MM .050" = 1.2700 MM .060" = 1.5240 MM .080" = 2.0320 MM .100" = 2.5400 MM .125" = 3.1750 MM .150" = 3.8100 MM .1875" = 4.7625 MM .250" = 6.3500 MM .3125" = 7.9375 MM .375" = 9.5250 MM .500" = 12.7000 MM .625" = 15.8750 MM .750" = 19.0500 MM .875" = 22.2250 MM 1.000" = 25.4000 MM 1.250" = 31.7500 MM 1.500" = 38.1000 MM 1.875" = 47.6250 MM 2.000" = 50.8000 MM 2.500" = 63.5000 MM 3.000" = 76.2000 MM 3.500" = 88.9000 MM 4.000" = 101.6000 MM 4.500" = 114.3000 MM 5.000" = 127.0000 MM 6.000" = 152.4000 MM 7.000" = 177.8000 MM 8.000" = 203.2000 MM 9.000" = 228.6000 MM 10.000" = 254.0000 MM 12.000" = 304.8000 MM 14.000" = 354.2000 MM 16.000" = 406.4000 MM 18.000" = 457.2000 MM 20.000" = 508.0000 MM 24.000" = 609.6000 MM 28.000" = 711.2000 MM 32.000" = 812.8000 MM 36.000" = 914.4000 MM 40.000" = 1016.0000 MM 45.000" = 1143.0000 MM 50.000" = 1270.0000 MM 56.000" = 1417.6000 MM 63.000" = 1600.2000 MM 70.000" = 1778.0000 MM 78.000" = 1981.2000 MM 86.000" = 2184.4000 MM 95.000" = 2413.0000 MM 105.000" = 2667.0000 MM 115.000" = 2921.0000 MM 126.000" = 3226.2000 MM 138.000" = 3503.4000 MM 150.000" = 3810.0000 MM 162.000" = 4126.2000 MM 175.000" = 4441.5000 MM 187.500" = 4762.5000 MM 200.000" = 5080.0000 MM 225.000" = 5715.0000 MM 250.000" = 6350.0000 MM 280.000" = 7112.0000 MM 315.000" = 7984.5000 MM 350.000" = 8890.0000 MM 390.000" = 9906.0000 MM 435.000" = 11056.5000 MM 480.000" = 12168.0000 MM 525.000" = 13327.5000 MM 570.000" = 14548.5000 MM 615.000" = 15730.5000 MM 660.000" = 16953.0000 MM 705.000" = 18168.0000 MM 750.000" = 19437.0000 MM 800.000" = 20730.0000 MM 850.000" = 22012.5000 MM 900.000" = 23295.0000 MM 950.000" = 24577.5000 MM 1000.000" = 25900.0000 MM 1050.000" = 27165.0000 MM 1100.000" = 28410.0000 MM 1150.000" = 29715.0000 MM 1200.000" = 31020.0000 MM 1250.000" = 32275.0000 MM 1300.000" = 33530.0000 MM 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6N341	9N64	SIZE CODE IDENT NO.	F 02750
APPLICATION	FINISH	SCALE	WT. 100

CONSOLIDATED CONTROLS CORPORATION
SCHEMATIC
FIELD BUFFER
SHEET 1 OF 1