



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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✓ Docket File  
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OELD  
OI&E (3)  
S. Norris  
Project Manager  
ACRS (16)  
NRC Participants  
TERA  
NSIC

8008280015

Memo  
4

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Docket No. 50-331

AUGUST 15 1980

LICENSEE: Iowa Electric Light and Power Company  
FACILITY: Duane Arnold Energy Center  
SUBJECT: SUMMARY OF MEETING ON AUGUST 13, 1980 CONCERNING PROPOSED REACTOR PROTECTION SYSTEM (RPS) POWER SUPPLY MODIFICATIONS FOR THE DUANE ARNOLD ENERGY CENTER (DAEC)

A meeting was held with the licensee at Bethesda, Maryland on August 13, 1980, at the licensee's request, to discuss the proposed modifications to the RPS power supply described in their July 1, 1980 submittal on this subject. The meeting consisted of a detailed description of the proposed modification by the licensee and further discussion, questions, and comments by the licensee and the NRC. A list of attendees and a copy of the material presented by the licensee describing the proposed modifications in further detail is enclosed.

In the July 1, 1980 submittal, Iowa Electric proposed replacing their non Class 1E motor generator sets with Class 1E transformers and not installing the equipment proposed by General Electric (GE) for resolution of this problem. They proposed relying on the undervoltage/overvoltage protection provided at the 4160V buses for protection of the RPS. It was pointed out by NRC that the primary concern with regard to the RPS arose from an over-voltage, rather than an undervoltage, condition.

The staff stated that it would require analyses to demonstrate the capability of the RPS to withstand power supply variations that could occur, and that the design as presented probably would not be approved. The licensee expressed concern over the surveillance frequencies required in conjunction with the GE proposed fix and their potential impact on plant operations.

Iowa Electric agreed to review their design in light of the discussions at this meeting and to submit a revised design for NRC approval upon completion of their review.

Original signed by

K. Eccleston, Project Manager  
Operating Reactors Branch #2  
Division of Licensing

OFFICE	DL:ORB#2				
Endlosure:	KEccleston				
SURNAME AS stated	8/14/80				
DATE					

AUGUST 13, 1980 RPS MEETING

R. F. Salmon	IEL&P Licensing
J. V. Vinquist	DAEC Maint. Engr.
T. A. Gucciardo	IE/Engineering
B. D. Shah	Iowa Electric/Bechtel Power Corp.
D. M. Verrelli	NRC/DL
Faust Rosa	NRC/DSI
Anwar Saeed	NRC/DSI
J. T. Beard	NRC/DL
K. T. Eccleston	NRC/DL

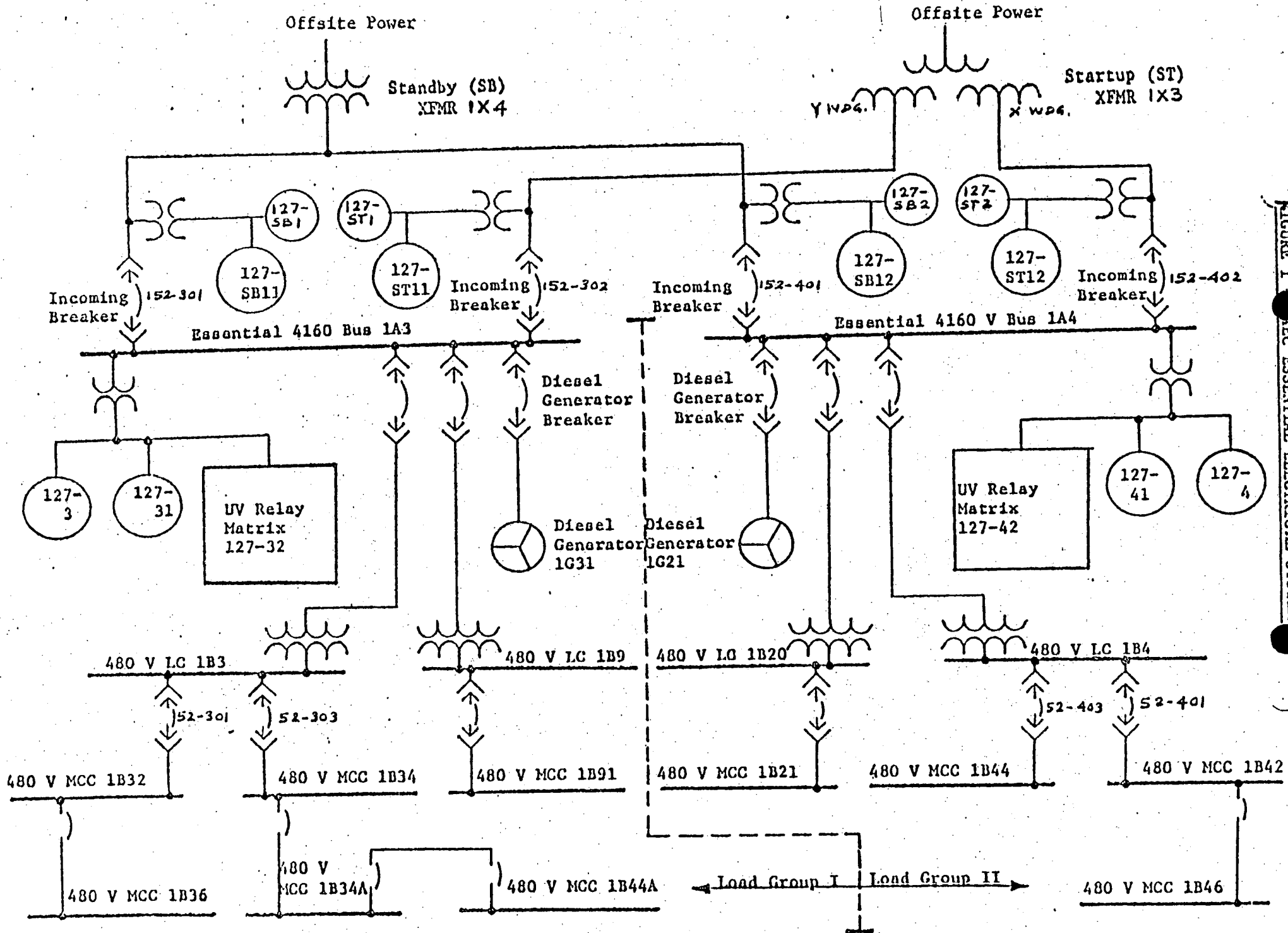


FIGURE 1 EC ESSENTIAL ELECTRICAL SYSTEM

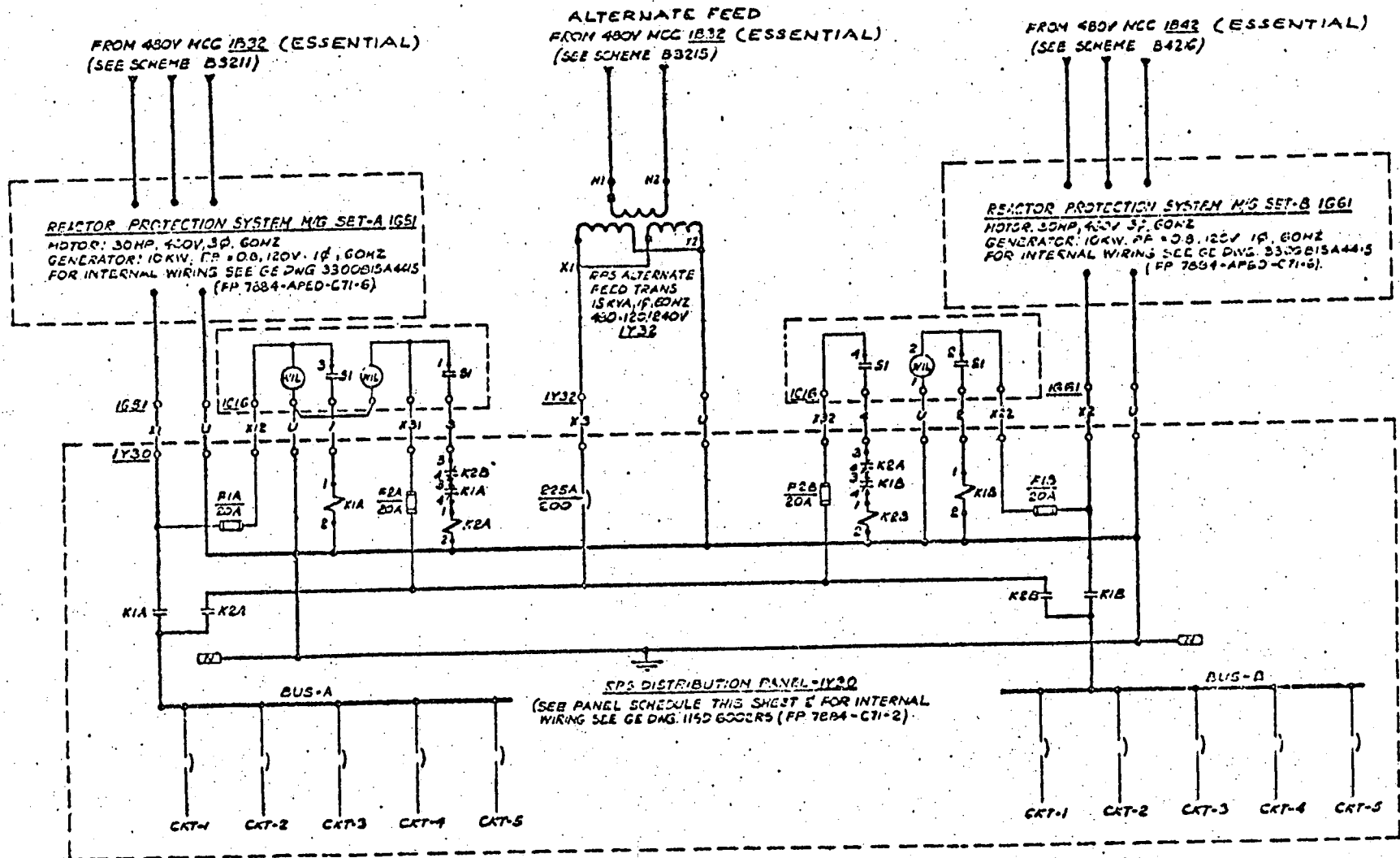
Figure 2

## DAEC

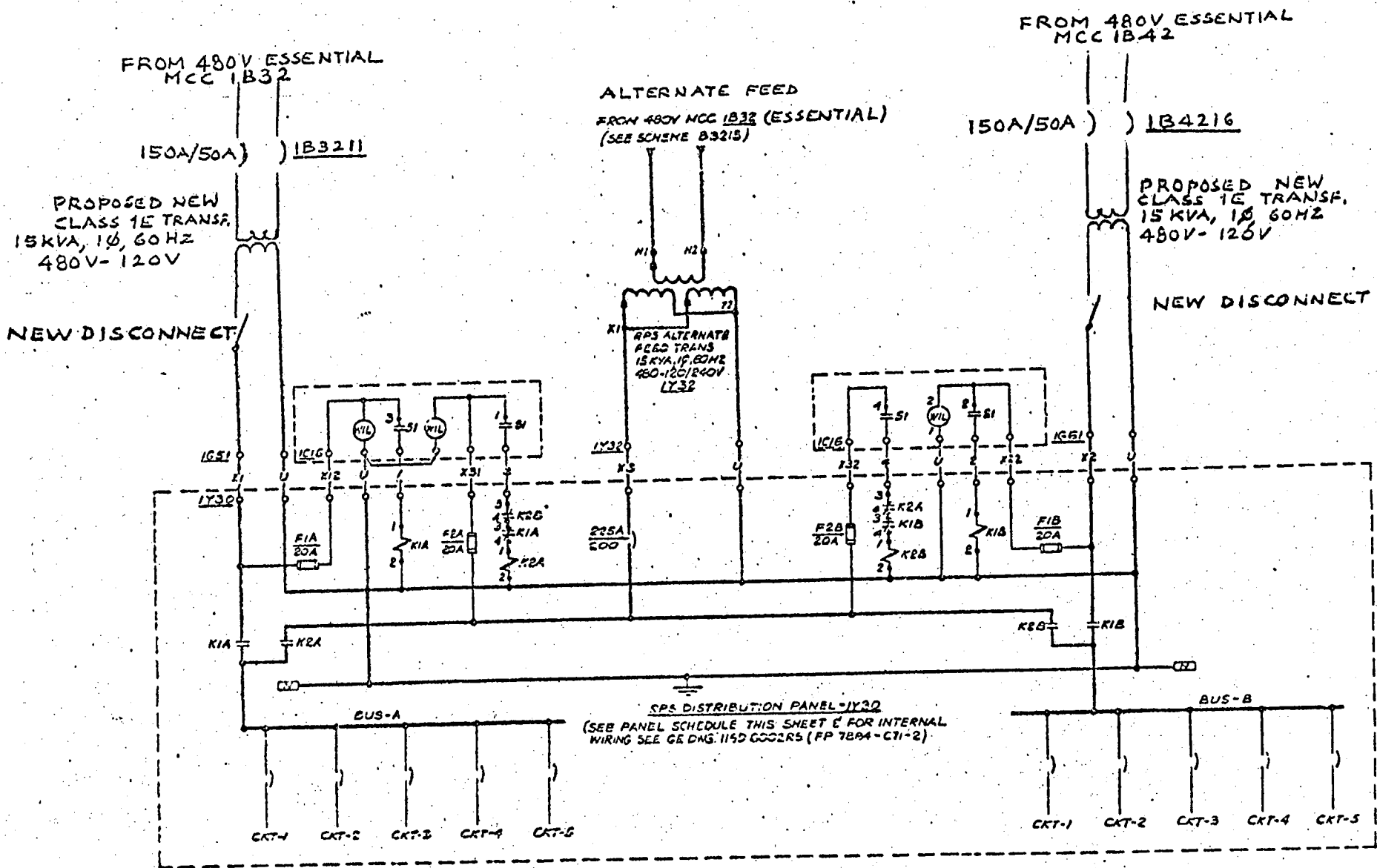
UNDERVOLTAGE SENSOR SETPOINTS

Bus 1A3		Bus 1A4		Function
Sensor	Setpoint (% of Nom.)	Sensor	Setpoint (% of Nom.)	
127-ST11	65%	127-ST12	65%	Trips incoming bkr, starts diesel generator and signals LOOP to the corresponding safety actuation system channel. Load Shedding Trips incoming bkr, starts diesel generator and signals LOOP to the corresponding safety actuation system channel.
127-SB1 127-SB11	65% 65%	127-SB2 127-SB12	65% 65%	
127-3 127-31 127-32 Matrix	20% 65% $108 \leq v \leq 111$ volts $8.0 \leq T.D. \leq 8.5$ Sec.	127-4 127-41 127-42 Matrix	20% 65% $108 \leq v \leq 111$ volts $8.0 \leq T.D. \leq 8.5$ Sec.	

The setpoints of the undervoltage sensors are chosen such that potential transients on the transmission system and bus voltage dips due to the starting of large motors will not cause a spurious transfer from the offsite power source to the onsite power source.

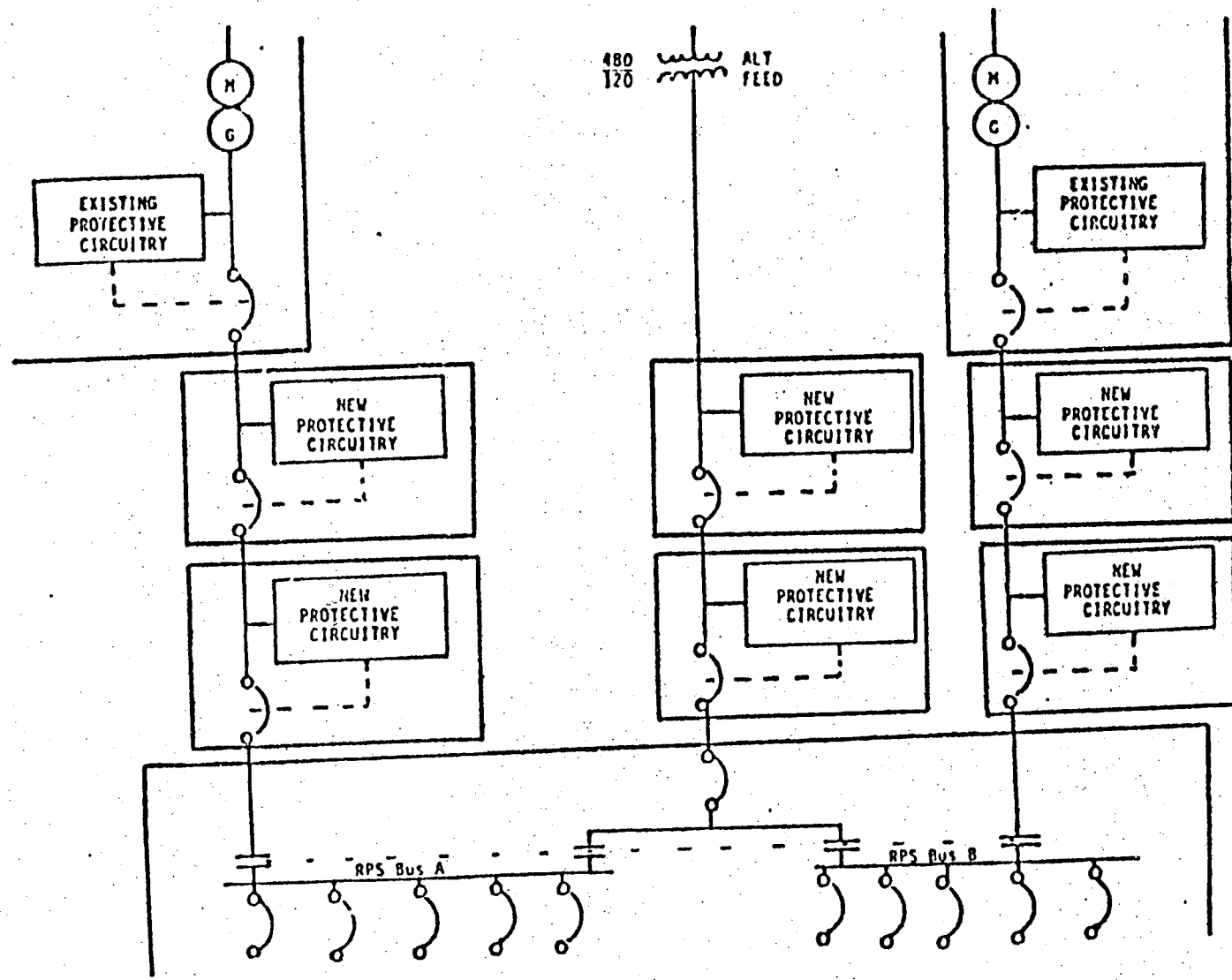


EXISTING  
 REACTOR PROTECTION AC DISTRIBUTION SYSTEM,  
 (SCHEME Y30)  
 FROM DWG NO. E-29



**MODIFIED**  
**REACTOR PROTECTION AC DISTRIBUTION SYSTEM.**  
 (SCHEME Y30)

ENCLOSURE # 2



GENERAL ELECTRIC  
 NUCLEAR ENERGY DIVISION

REV. 0  
 22A5941  
 SH. NO. 3

FIGURE 1 ELECTRICAL PROTECTION ASSEMBLY FOR RPS, BLOCK DIAGRAM