



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

AEOD/E108

APR 21 1981

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MEMORANDUM FOR: File

FROM: M. Chiramal  
Office for Analysis and Evaluation  
of Operational Data

306  
321

SUBJECT: HATCH UNITS 1 and 2 - ALTERNATE OFFSITE SOURCE INTERLOCK WITH EMERGENCY DIESEL GENERATORS

Reference: (1) IE Daily Report dated April 6, 1981

The licensee, while performing a relay trip procedure at Hatch 1, identified that the undervoltage relays of the second offsite source would not operate. The relays are designated "Transformer 1C UV relays 27-1 and 27-2." (see attached logic diagram). Transformer 1C is the alternate offsite source to the safety-related buses.

The design of the station safety-related electrical system is such that on loss of the primary offsite source (monitored by UV relays 27-3, 27-4, 27-5, and 27-6 on each safety bus) the diesel generators are started and the safety buses seek the alternate offsite source -- transformer 1C. If this offsite source is unavailable (as seen by the operation of UV relays 27-1 and 27-2), then the DG breakers are closed to energize the safety buses.

The UV relays 27-3 through 27-6 that monitor the voltage of each safety bus are designated as Class 1E equipment -- a set of four is provided for each bus. The UV relays 27-1 and 27-2, however, are not designated Class 1E and only one pair is provided for all the safety buses. On April 6, 1981 during the trip procedure, relays 27-1 and 27-2 did not operate, thus preventing the closure of all the DG breakers on Unit 1. The design is the same for Unit 2.

The licensee will be proposing a design modification to correct the problem of the non-Class 1E interlock that prevents the automatic operation of safety systems. ORAB/NRR is presently pursuing this matter. Other than keeping ourselves informed of the resolution of the design problem, we do not anticipate any further AEOD action.

Matthew Chiramal  
Office for Analysis and Evaluation  
of Operational Data

A44

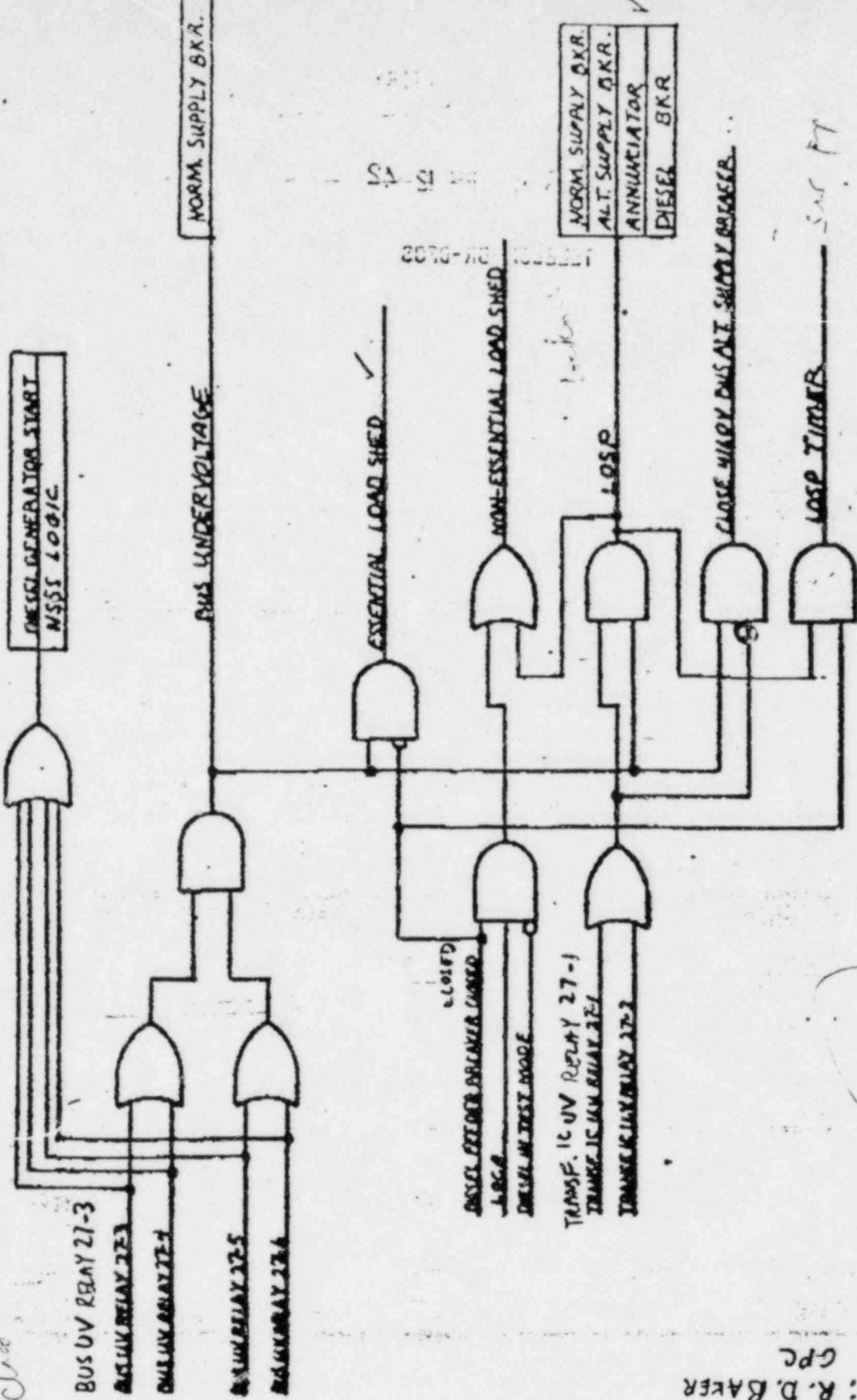
Attachment:  
As stated

XA PDR

81042 90103

cc w/attachment:  
CMichelson, AEOD  
CHeltemes, AEOD  
FAshe, AEOD

DIESEL GENERATOR 1A U.V. RELAY LOGIC (TYPICAL)



16  
CPC

BUS UV RELAY 27-3  
DIESEL RELAY 27-4  
DIESEL RELAY 27-5  
DIESEL RELAY 27-6

ESSENTIAL LOAD SHED  
NON-ESSENTIAL LOAD SHED  
LOSP  
CLOSE 41KV DIESEL SUPPLY BREAKER  
LOSP TIMER

NORM. SUPPLY BKR.
ALT. SUPPLY BKR.
ANNUNCIATOR
DIESEL BKR.

1177

TO: M. FAIRLIE > 1 PAGE  
HATCH LPM

FROM: R. D. BAKER  
CPC

DRAWN BY: DABROCK 4/14/81  
CHECKED BY: S.R. Sisson 4/14/81

BLE OCCURRENCE - WHILE PERFORMING A RELAY TRIP PROCEDURE, THE FOLLOWUP PER  
E IDENTIFIED THAT THE LOCKOUT UNDERVOLTAGE RELAYS FOR THE MC 2515.  
OFFSITE FEED WOULD NOT OPERATE. THESE RELAYS ALLOW THE EMER-  
GENSELS TO TIE INTO THE EMERGENCY BUSES. THE RELAYS WERE  
Y EXERCISED AND TESTED SATISFACTORILY. UNIT 1 IS CURRENTLY  
FUELING DTJAGE. UNIT 2 RELAYS WILL BE TESTED TODAY. THE  
E IS INVESTIGATING THE RELAY FAILURE. REPORT DUE 4/20.