CENTRAL FILES

DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

January 7, 1981

TELEPHONE: AREA 704
373-4083

Mr. James P. O'Reilly, Director
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Re: RII:JPO
50-269, -270, -287
IE Bulletin 80-06

Dear Sir:

Please find attached a supplemental response to the subject Bulletin. My letter of July 14, 1980 provided Duke Power's previous response to this Bulletin and stated that the following equipment would have control modifications made to ensure that they remain in the safety mode required by ES actuation after the signal is reset:

1. High Pressure Injection Pumps
2. Penetration Room Exhaust Fans
3. Reactor Building Cooling Unit Fans
4. Keowee Start

The attached information provides a narrative description of the operation of each of these components after completion of the modifications. Simplified diagrams are also provided to illustrate the modifications to the control circuitry.

The July 14 response committed to have these modifications completed on each Oconee unit by the end of its next refueling outage. However, the design packages for these modifications have not been completed. Therefore, these modifications cannot be implemented during the present Unit 3 refueling outage. The modification design packages will be completed in time for implementation during the next refueling outages of Units 1 and 2, and they will be implemented on Unit 3 during the first available outage after March 1, 1981.

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As discussed in the July 14 response, Duke Power considers the present designs of these systems to be acceptable. These modifications are being made to provide further assurance that the affected systems remain in their safe mode following ES reset. Thus, Duke Power does not consider the delay in implementation of the modifications on Unit 3 to be significant with respect to safe operation of the plant or its effect on the health and safety of the public.

Very truly yours,

William O. Parker, Jr.

FTP:scs

Attachment

cc: Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Director
U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Division of Reactor Operations
Inspection
Washington, D. C. 20555

DUKE POWER COMPANY
OCONEE NUCLEAR STATION

Supplemental Response to IE Bulletin 80-06
Engineered Safety Feature (ESF) Reset Controls

January 7, 1981

High Pressure Injection (HPI) Pumps A, B, and C

The HPI pumps are driven by 4KV motors that are controlled by remote operation of their circuit breakers. These 4KV circuit breakers require only a momentary signal to close and will then remain closed until they are given a trip signal to energize their trip coils.

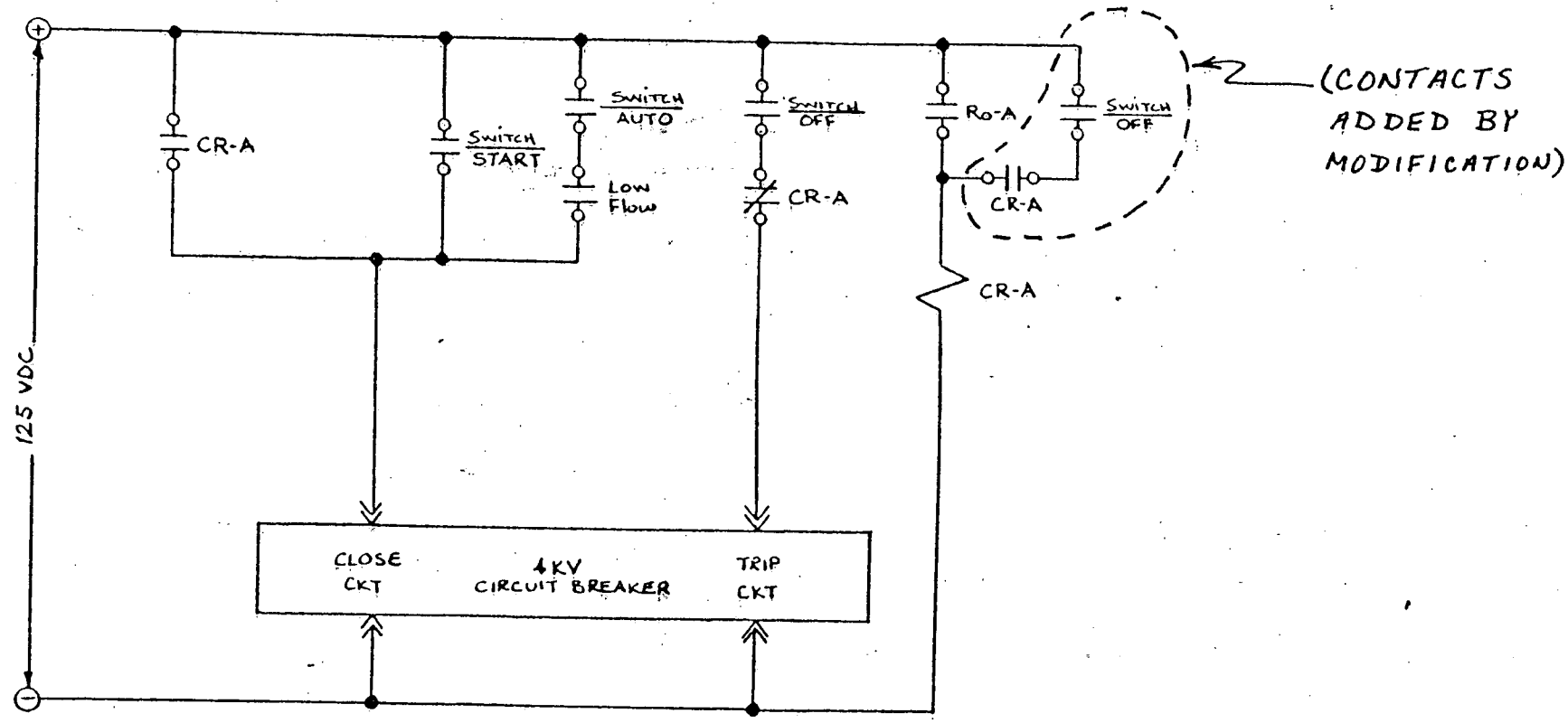
HPI pumps A or B may be either off, running, or in automatic control. For either pump an ES signal closes a contact (Ro) in the Engineered Safeguards Cabinet which energizes a control relay (CR) to provide a close signal and to block a trip signal to the pump circuit breaker. (For pump B controls an Ro contact and a associated control relay are provided for both trains of engineered safeguards). When the ES signal is reset one of the following conditions exist:

1. If the pump control switch is in RUN or AUTO positions, relay CR is deenergized but the pump continues to run because its circuit breaker has not been given a trip signal.

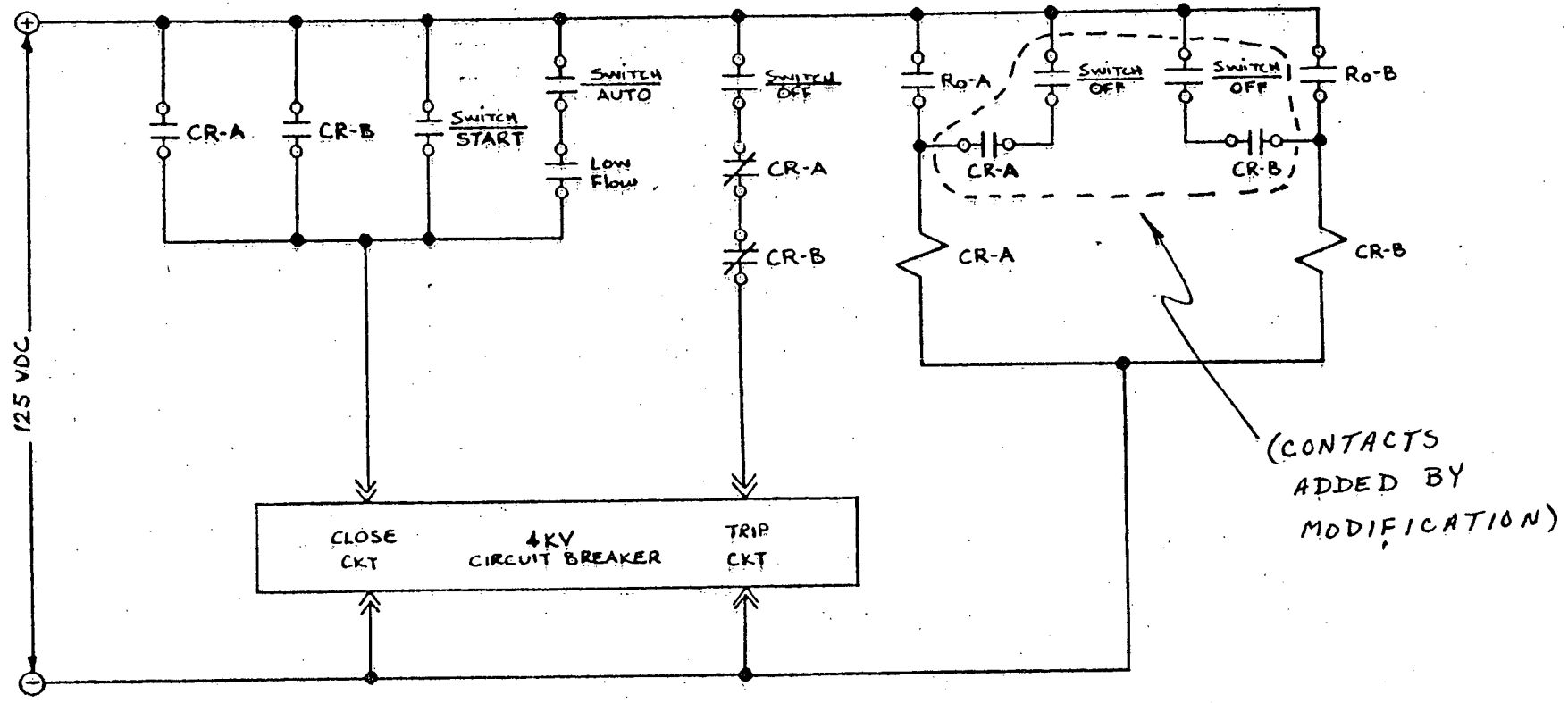
2. If the pump control switch is in OFF, relay CR is sealed-in by a contact from relay CR connected in series with a control switch contact that is closed when the switch is in the OFF position. In order to stop the pump, the operator must turn the control switch to either RUN or AUTO and back to OFF. (Appropriate instructions are provided to the operator adjacent to the control switch)

HPI pump C utilizes a momentary push-button in the circuit breaker trip circuit thus eliminating the need for an ES signal seal-in. No control changes are required for HPI pump C.

SIMPLIFIED DIAGRAM OF CONTROLS
FOR HIGH PRESSURE INJECTION PUMP A



SIMPLIFIED DIAGRAM OF CONTROLS
FOR HIGH PRESSURE INJECTION PUMP B



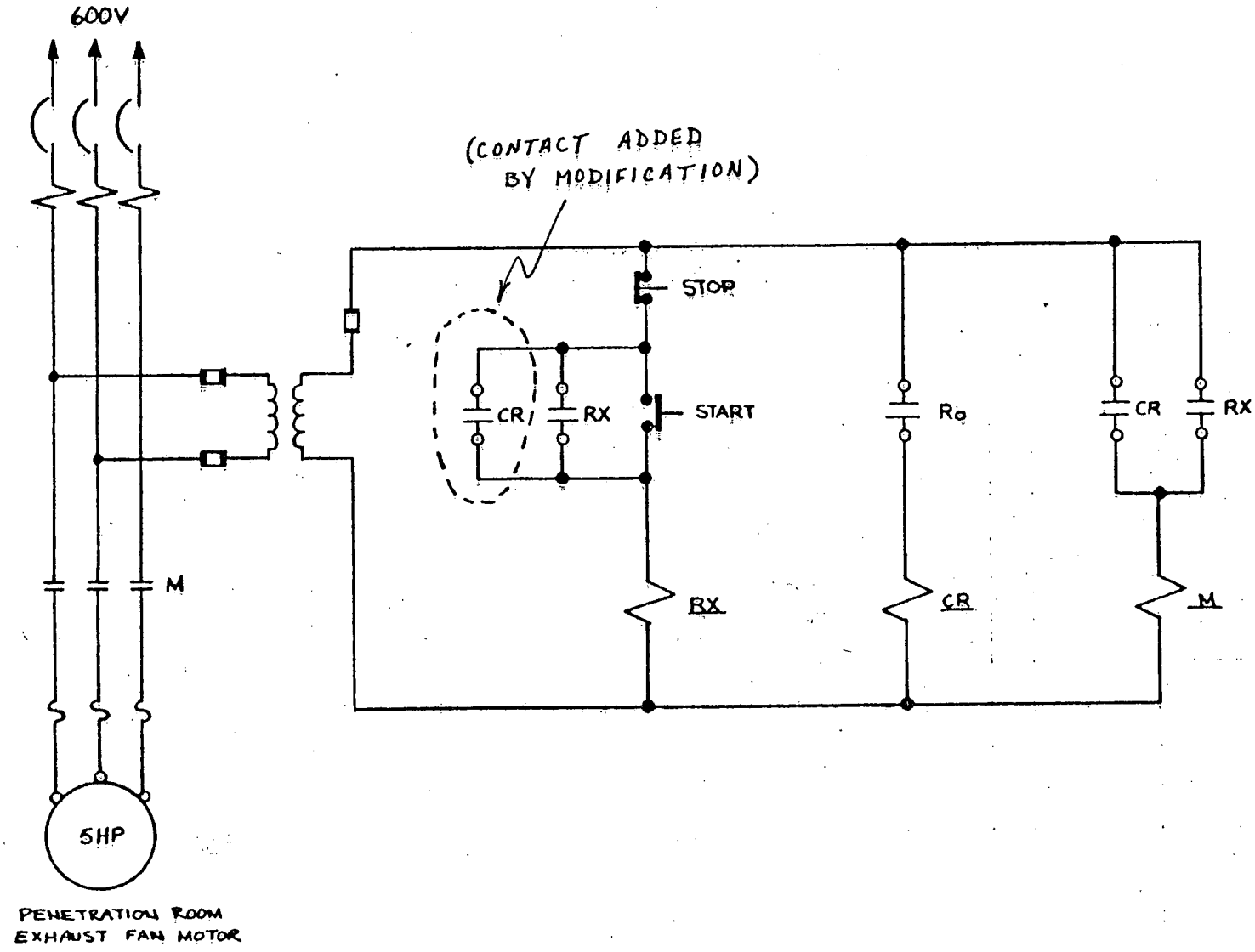
Penetration Room (PR) Exhaust Fans A and B

A penetration room exhaust fan is driven by a 600 volt motor that is controlled by a motor starter M coil. When the M coil is energized, its contacts close to provide power to the fan motor. The M coil may be energized to start the PR fan motor by either of two methods:

1. Pressing the START push-button momentarily closes a contact to energize auxiliary relay RX. Contacts from relay RX close to seal itself in and to energize the M coil. A momentary STOP push-button in series with relay RX is provided to deenergize RX thus deenergizing the M coil and the motor.

2. An engineered safeguards contact (Ro) closes on an ES signal to energize a control relay (CR). Contacts from relay CR close to energize the M coil and to energize relay RX. Relay CR remains energized until the ES signal is reset, but the motor continues to run until the STOP push-button is operated because relay RX has sealed-in.

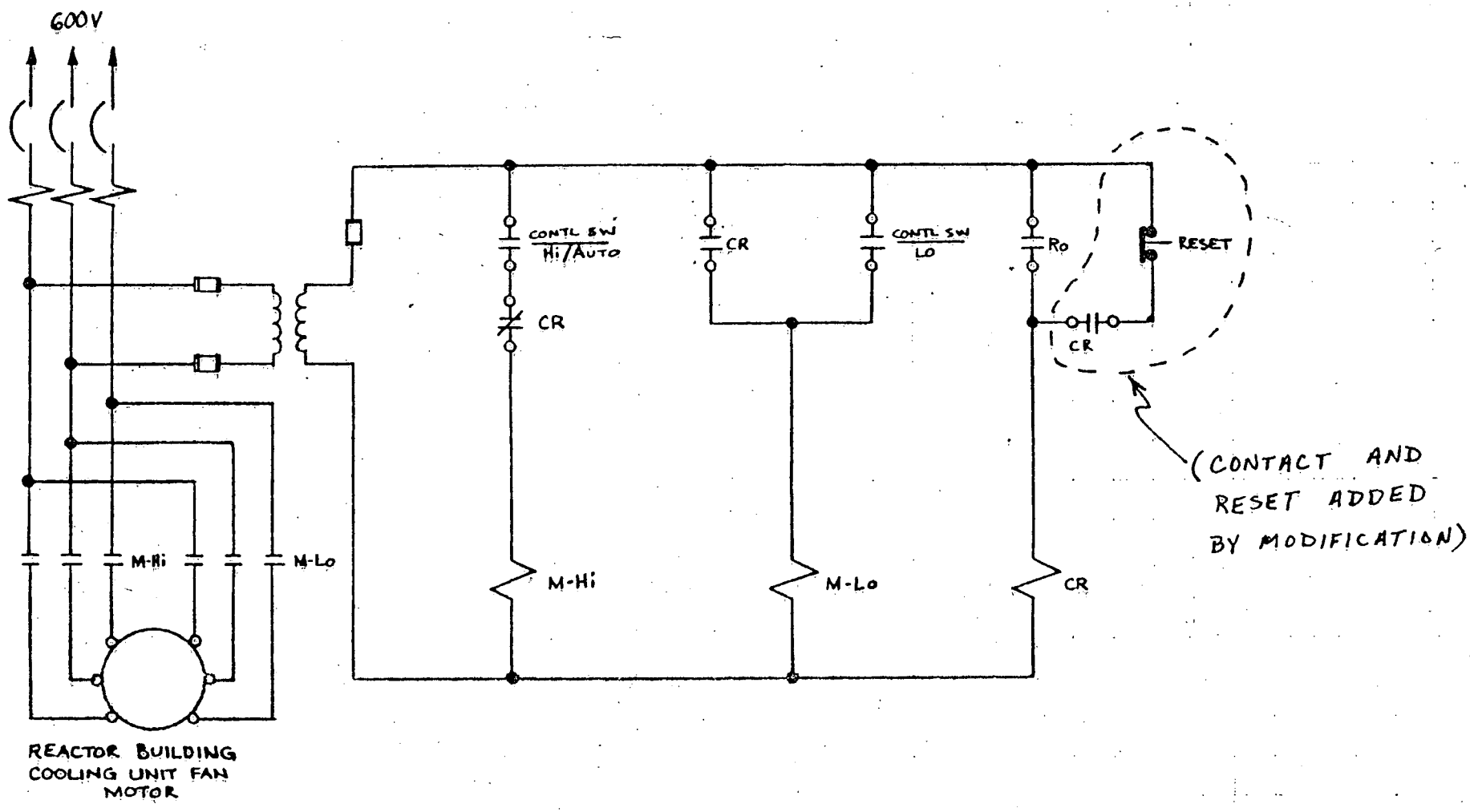
SIMPLIFIED DIAGRAM OF CONTROLS
FOR A PENETRATION ROOM EXHAUST FAN



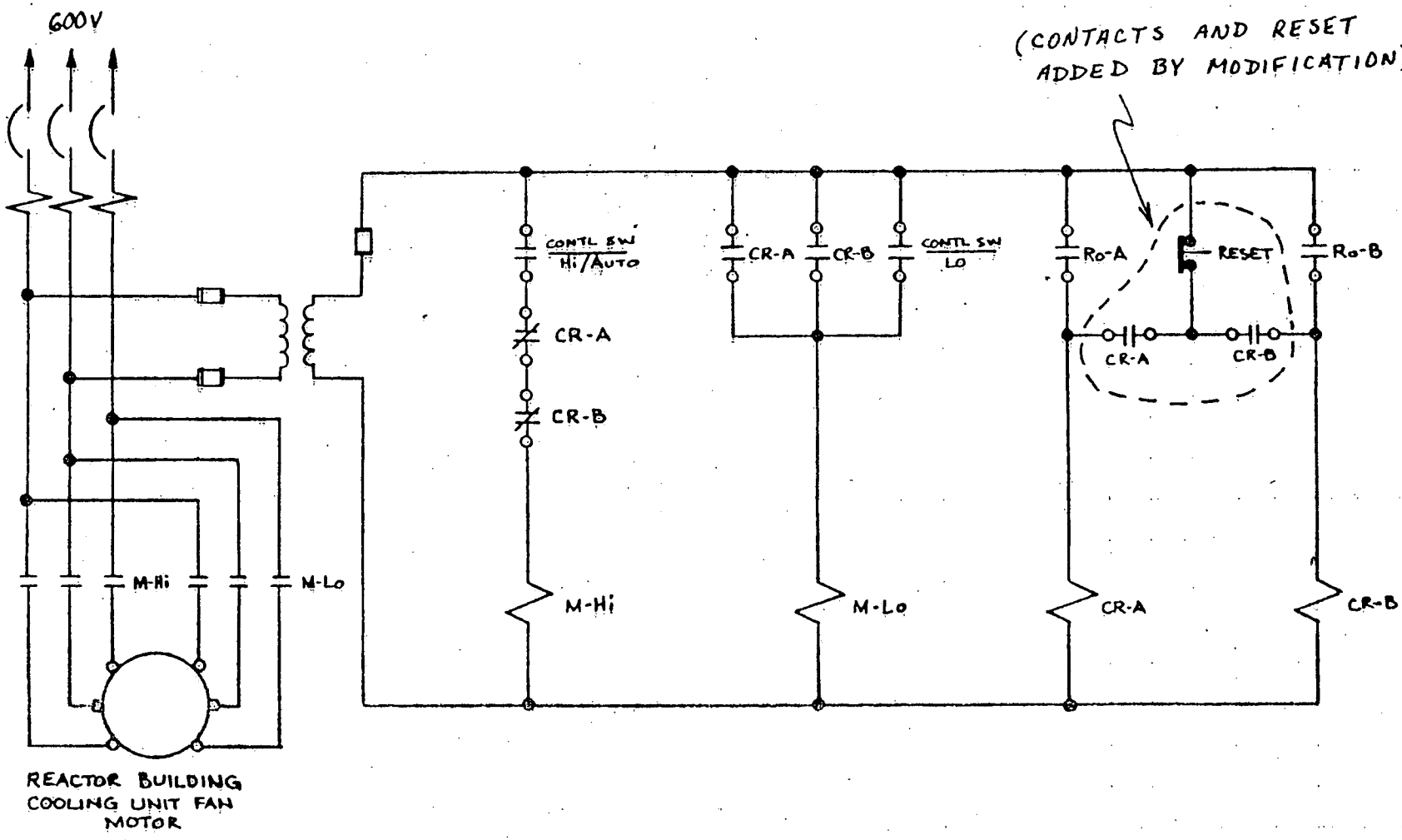
Reactor Building Cooling Unit (RBCU) Fans A, B, and C

A reactor building cooling unit fan is driven by a two speed, 600 volt motor that is controlled by a two speed motor starter. An ES signal starts the fan motor by closing a contact (Ro) in the Engineered Safeguards Cabinet. Contact Ro energizes control relay CR which blocks high speed operation and initiates low speed operation of the fan motor. (For fan B an Ro contact and an associated control relay is provided for both trains of engineered safeguards). The control relays close contacts to seal themselves in thus maintaining the fan motor in low speed operation after the ES signals are reset. A reset push-button is provided for deenergizing the control relays to allow a return to normal operation.

SIMPLIFIED DIAGRAM OF CONTROLS
FOR REACTOR BUILDING COOLING UNIT FAN A OR C



SIMPLIFIED DIAGRAM OF CONTROLS
FOR A REACTOR BUILDING COOLING UNIT FAN B



Keowee Start A and B

For each channel of Keowee start logic, an emergency start relay (CR) provides a signal to start both Keowee units. The Keowee emergency start relay is energized by any one of the following:

1. a main feeder bus undervoltage signal for both Oconee main feeder buses (Tx1 and Tx2),
2. a trouble signal from the External Grid Trouble Protection System (ST),
3. operation of the control room emergency start switch (S1),
4. operation of the key operated emergency start switch (SSW) in the cable room, or
5. an ES signal (Ro)

Once the emergency start relay is energized, one of its contacts seals-in the circuit to maintain the start signal after the ES signal (or any other initiating signal) is reset. A CLEAR push-button is provided to deenergize the emergency start relay when all initiating signals have been reset.

SIMPLIFIED DIAGRAM OF CONTROLS
FOR ONE CHANNEL OF KEOWEE EMERGENCY START LOGIC