

**DUKE POWER COMPANY**  
**NUCLEAR PRODUCTION DEPARTMENT**  
P.O. BOX 33189, 422 SOUTH CHURCH STREET  
CHARLOTTE, N.C. 28242  
(704) 373-4011

September 23, 1985

Darl Hood, NRC Project Manager  
Division of Licensing  
Office of Nuclear Regulatory Commission  
Washington, D. C. 20555

Subject: McGuire Nuclear Station  
Response to Questions Concerning  
Fire Suppression Pump 'C'

In response to your questions of September 10, 1985, the following information is provided:

1. Can any fire suppression pump be loaded on the 1E diesel?

The repowering of an existing Fire Suppression Pump from a Class 1E Diesel is undesirable due to current loading on the 1E Diesels, such an arrangement would cause the power to be unavailable during LOCA situations.

2. For fire suppression pump 'C', is the substation part of the grid or can it be separated from it?

Fire Suppression Pump C receives power from a 44KV substation fed from Riverbend Steam Plant Switchyard. There is no direct connection between the McGuire Switchyard and the 44KV System at Riverbend. The McGuire 525KV Switchyard has no direct tie to Riverbend, while the 230KV Switchyard is connected to Riverbend via the Schoonover and Norman Lines (see attached). At Riverbend, Units 6 and 7 feed the 230KV Switchyard through step-up transformers 6B and 7B.

The 44KV Switchyard is fed from the 100KV Switchyard through a tertiary winding on the step-up transformer for Units 1, 2, and 3 or through tie lines such as Mountain Island.

Under normal plant conditions, there is no tie between the 230KV Switchyard and the 44KV Switchyard at Riverbend. Units 6 and 7 have the capability to be aligned to the 100KV yard through alternate step-up transformers 6A and 7A; however, if this alignment is used, breakers to the 230KV Switchyard are opened and still no direct connection exists between the 230KV Switchyard and the 44KV Switchyard.

This isolation allows a total blackout of the McGuire Switchyard for any reason-fault, natural disaster, equipment failure, etc. to occur with no consequences to the 44KV feeder to Fire Suppression Pump C. Therefore, for any localized blackout situation at McGuire which would cause the loss of Fire Suppression Pumps A and B, Fire Suppression Pump C would still be available for service.

8509270035 850923  
PDR ADOCK 05000369  
PDR  
F

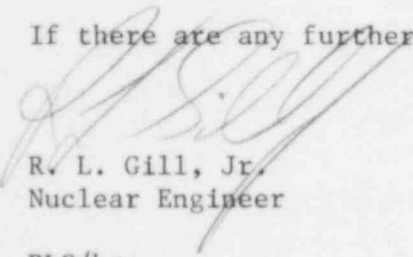
Acob  
1/1

Darl Hood, Project Manager  
September 23, 1985  
Page 2

3. Stability studies - are there quantitative type studies that have been performed that could be used to support the "independence" of the substation?

To our knowledge, no quantitative type studies have been performed that could be used to support the independence of the substation. However, a record of power interruptions to Fire Suppression Pump C from May, 1975 to November, 1982 (see Attachment 1) shows the 44KV line to be reliable.

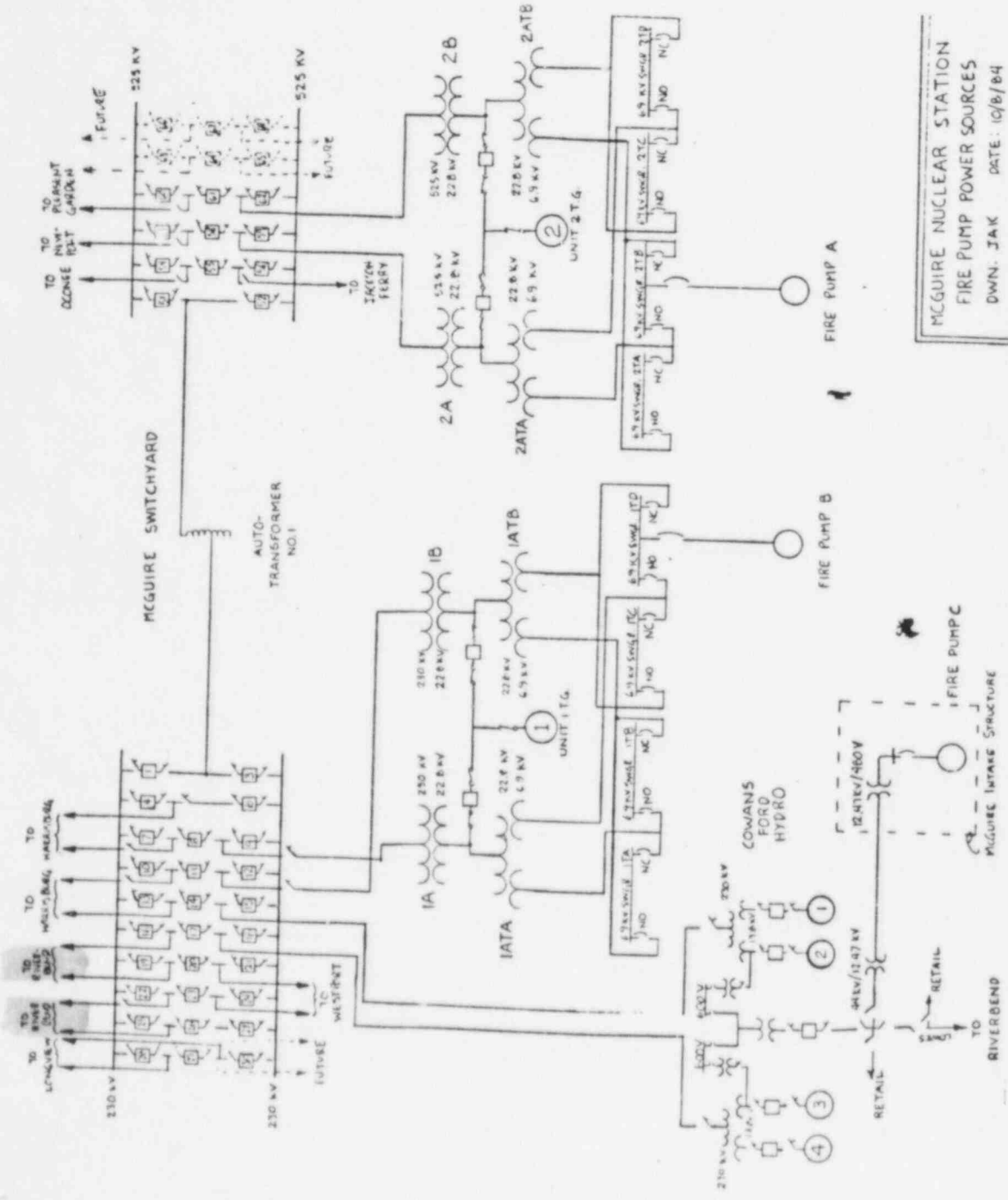
If there are any further questions regarding this area of concern, please call.



R. L. Gill, Jr.  
Nuclear Engineer

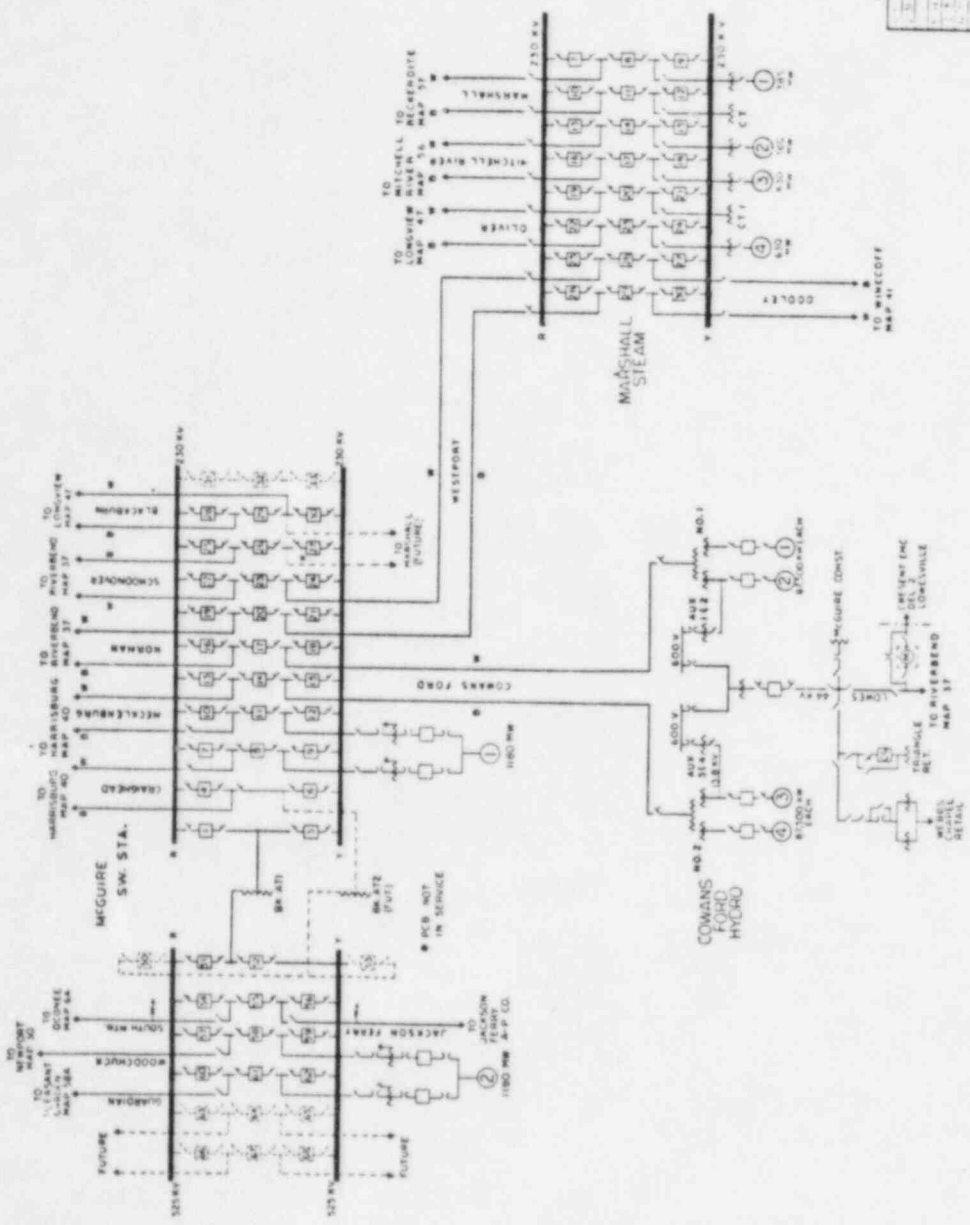
RLG/hrp

Attachments



MCGUIRE NUCLEAR STATION  
 FIRE PUMP POWER SOURCES  
 DWN: JAK DATE: 10/8/84





CLINT POWER DESIGN

NO.	DATE	REVISION
1	10-1-58	1
2	10-1-58	2
3	10-1-58	3
4	10-1-58	4
5	10-1-58	5
6	10-1-58	6
7	10-1-58	7
8	10-1-58	8
9	10-1-58	9
10	10-1-58	10

Attachment 1

Record of Power Interruption to McGuire C Main Fire Pump Motor

<u>DATE</u>	<u>DIRATOPM</u>	<u>CAUSE</u>
1. May 14, 1975	1 min	no indication
2. June 12, 1975	88 min	lighting
3. November 22, 1977	19 min	no indication
4. October 2, 1979	less than 1 min	lighting
5. November 4, 1982	137 min	line insulator failure