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SUBJECT: Forwards info re arrangement & actuation logic for 1C Safety Injection Pump. Reports that logic arrangement meets separation & single failure criteria.

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LEON D. WHITE, JR.
VICE PRESIDENT

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February 13, 1979

Director of Nuclear Reactor Regulation
Attention: Mr. Dennis L. Ziemann, Chief
Operating Reactors Branch No. 2
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: SEP Topic VII-7, "Acceptability of Swing Bus Design"

Dear Mr. Ziemann:

The information in this letter is being provided in response to a request from a member of your staff relative to the actuation logic for the 1C Safety Injection Pump. The logic scheme for this pump is such that it can be automatically tied to either safeguards bus 14 or 16, the two redundant sources of emergency onsite power. However, no single failure can cause parallel operation of the two redundant buses, or cause both buses to be rendered inoperable.

1) Actuation logic for the 1A, 1B, and 1C pumps is shown on elementary wiring diagrams 10905-73, 10905-74, and 10905-75, which were included in a comprehensive package of Ginna electrical drawings transmitted to you on November 22, 1978.

2) The arrangement and actuation logic for pump 1C is essentially this: when a safety injection signal is generated, Agastat timer 2/SIP1C2 automatically ties SI pump 1C to bus 14 after 5 seconds by closing breaker 52/SIP1C2. A normally closed contact (b) off breaker 52/SIP1C2 opens when the breaker closes. The opening of this contact will prevent breaker 52/SIP1C1, which would energize SI pump 1C from safeguards bus 16, from closing.

If Agastat timer 2/SIP1C2 failed, another redundant timer 2/SIP1C1, would tie Pump 1C to bus 16 by closing breaker 52/SIP1C1 after an additional 2 seconds. A normally closed contact (b) off 52/SIP1C1 would open when this breaker closed, thus further ensuring

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that Pump 1C could not be tied to bus 14.

This arrangement meets separation and single failure criteria, since it would require the simultaneous failure of a breaker and a timing relay (Agastat) to tie buses 14 and 16 together through SI Pump 1C.

Very truly yours,

Leon D. White, Jr.

Leon D. White, Jr.