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May 7, 1984

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Director of Nuclear Reactor Regulations
Attention: Mr. G.W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Waterford SES Unit 3
Docket No. 50-382
Clarification of our 2/27/84 Response to IE Bulletin 79-27:
Loss of Non-Class 1-E Instrumentation and Control Power
System Bus During Operation

Dear Sir:

This letter is provided as a follow-up to our discussions held in Bethesda on 4/16/84 with the Instrumentation and Control Systems Branch (NRC) reviewer on the subject bulletin response. The following clarifying information corresponds to the numbered paragraphs of the response.

1. All instrumentation and control required for safe shutdown is redundant and Class 1E.
2. The seven buses for which bus loss procedures have been developed were chosen based on the degree of disruption of safe shutdown that their loss would cause. A loss of any one of these buses does not prevent safe shutdown, but does incapacitate enough safe shutdown equipment such that a special procedure is deemed necessary.

There are some other instrument and control buses that power safe shutdown equipment. A loss of any one of these buses does not prevent safe shutdown and in fact has such a minor effect on safe shutdown (i.e., incapacitates very little safe shutdown equipment) that a special procedure is not deemed necessary.

Each of the seven buses has its own trouble annunciator in the Main Control Room. A loss of voltage at the bus will actuate the annunciator in each case. These annunciators are shown on CWDs 2924 (C1208, C1209 & C1210) and 2925 (D0906, D1006, D1106 & D1206).

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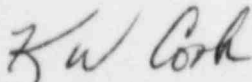
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3. The items below correspond to the recommended considerations of IE Circular 79-02:

- ° The Waterford 3 Class IE UPS does not have time delay circuitry as in the Arkansas units. This is not a standard SCI design and is apparently unique to Arkansas who specified that upon low dc voltage to the inverter input, both the battery source input and normal 480V, 3 ϕ rectifier input circuit breakers be tripped after a thirty second delay. Although this circuitry did not contribute to the UPS failures at Arkansas, the NRC included this item as it was discovered during the investigation that one UPS was set at a one second delay instead of thirty seconds.
- ° The Waterford 3 Class IE UPS has a regulated rectifier design where the Arkansas units do not. We therefore do not expect any problems with voltage transients on the normal 480V supply as they will be suppressed through the regulated rectifier.
- ° The Waterford 3 Class IE UPS does not have an automatic bypass switch, therefore the alternate 120 volt source problems are not applicable.
- ° Administrative controls at Waterford 3 require post maintenance testing of safety related components to ensure operability of safety systems.

We trust that the information provided by this letter is sufficient to close out SER Item 7.1.2(2). We respectfully request this item be addressed in the next supplement to the SER.

Very truly yours,



K. W. Cook
Nuclear Support & Licensing Manager

KWC/KNC/ch

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