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 FACIL: 50-269 Oconee Nuclear Station, Unit 1, Duke Power Co.  
 50-270 Oconee Nuclear Station, Unit 2, Duke Power Co.  
 50-287 Oconee Nuclear Station, Unit 3, Duke Power Co.

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 AUTHOR AFFILIATION: Duke Power Co.  
 RECIP. NAME: REID, R.W.  
 RECIPIENT AFFILIATION: Operating Reactors Branch 4

SUBJECT: Submits info re procedures for coping w/combinations of  
 loss of instrumentation & control functions, design review  
 analysis & correction of electrical deficiencies.

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 TITLE: B&W Plant Response re Crystal River Event

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# DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
STEAM PRODUCTION

March 24, 1980

TELEPHONE: AREA 704  
373-4083

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

Attention: Mr. R. W. Reid, Chief  
Operating Reactor Branch No. 4

Subject: Oconee Nuclear Station  
Docket Nos. 50-269, -270, -287

Dear Sir:

During a meeting between the B&W utilities\* and the NRC Staff on March 18, 1980, Duke Power Company was requested to respond in writing by March 24, 1980 to three NRC items which arose from the Crystal River 3 transient. The specific items and the response of Duke Power follow.

1. Actions which will allow the operator to cope with various combinations of loss of instrumentation and control functions. This included changes in (A) equipment and control systems to give clear indications of functions which are lost or unreliable; (B) procedures and training to assure positive and safe manual response by the operator in the event that competent instruments are unavailable.

## Response

As documented in previous communications in this matter with the Staff, including my letter of March 12, 1980, it is considered that the existing design of Oconee systems and existing procedures allow the operator to cope with various combinations of loss of power to the NNI/ICS system. In particular, alarm indications provide information to the operator on loss of various instrument and control functions and emergency procedures provide assurance of positive and safe response by the operator. Our operators are confident of their capability to respond to the loss of NNI/ICS. It is considered that no further actions in response to this concern are required.

2. Verification of the effects of various combinations of loss of instrumentation and control functions by design review analysis and by test.

*Handwritten:* Approved  
5/10

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Mr. Harold R. Denton, Director  
March 24, 1980  
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Response

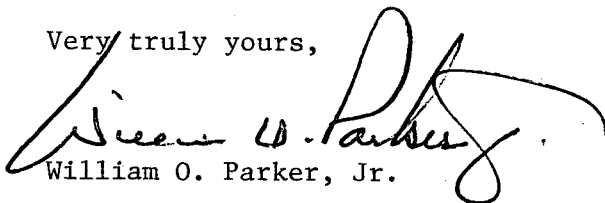
Following the November 10, 1979 transient of Oconee 3, a review of design documents was conducted and a procedure implemented which describes the symptoms characterizing loss of non-nuclear instrumentation power, and immediate automatic action which will take place and manual action to be executed by the operator. The procedure also identifies all instrumentation and control affected by the loss of power and enumerates the state in which the device will fail. The NNI/ICS systems are functionally identical on all three Oconee units and it is considered the modification control process and document control process in place at Oconee have been effective in accurately reflecting the as-built conditions on design documents, from which the above procedure was developed. To confirm this, loss of NNI/ICS power tests will be performed on both Oconee Unit 2 and Oconee Unit 3 within 90 days. The results of these tests will be used to verify the validity of the existing procedure and the means by which it was developed. Based on the results of these reviews, it will be determined whether or not additional testing is needed. Future testing of the Unit 1 system is not warranted unless in the unlikely event the Unit 2 and 3 systems do not respond as expected.

3. Correction of electrical deficiencies which may allow the power operated relief valve and pressurizer spray valve to open on non-nuclear instrumentation power failures, such as, the event which occurred at Crystal River 3 on February 26, 1980.

Response

As documented in previous communications in this matter with the Staff including my letter of March 12, 1980, the design of the control system of the power operated relief valves and the pressurizer spray valves at Oconee do not allow the valve to open on non-nuclear instrumentation power failures. It is considered that no additional modifications to the electrical design are required to address this concern.

Very truly yours,

  
William O. Parker, Jr.

RLG:scs