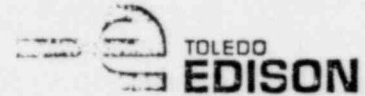


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Docket No. 50-346

License No. NPF-3

Serial No. 1-129

May 6, 1980

RICHARD P. CROUSE
Vice President
Nuclear
(419) 259-5221

Mr. James G. Keppler
Regional Director, Region III
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

This letter is in response to IE Bulletin 79-27 dated November 30, 1979 (Log No. 1-280) as applicable to the Davis-Besse Nuclear Power Station, Unit 1.

This is a follow-up to a partial response dated March 3, 1980 (Serial No. 1-116). Toledo Edison considers this to complete our responses to the subject Bulletin.

Attached are the remainder of Toledo Edison's responses. Several of the items of the Bulletin are still being evaluated; the results will be incorporated into our overall plans as indicated in the attachment. The projected schedule completion dates for our actions are provided.

Very truly yours,

RPC:TJM:LCS:cts

Attachment

cc:
Luis Reyes
NRC Site Inspector

MAY 9 1980

Docket No. 50-346
License No. NPF-3
Serial No. 1-129
May 6, 1980

Response to IE Bulletin 79-27 for
Davis-Besse Nuclear Power Station, Unit 1

REQUEST

1. Review the Class 1E and non-Class 1E buses supplying power to safety and non-safety related instrumentation and control systems which could affect the ability to achieve a cold shutdown condition using existing procedures or procedures developed under item 2 below. For each bus:
 - a) identify and review the alarm and/or indication provided in the control room to alert the operator to the loss of power to the bus.
 - b) identify the instrument and control system loads connected to the bus and evaluate the effects of loss of power to these loads including the ability to achieve a cold shutdown condition.
 - c) describe any proposed design modifications resulting from these reviews and evaluations, and your proposed schedule for implementing those modifications.

RESPONSE FOR ITEM b)

Toledo Edison has continued an expanded scope evaluation of the effects of loss of power to each bus required to achieve cold shutdown. The expanded scope includes both power supplies external to the NNI/ICS, and internal power supplies.

This work included an NNI/ICS failure modes and effects analysis. The approach used in this analysis was as follows:

1. Define the power supplies and determine the power supply failure modes.
2. For the NNI, define the signal select hand station positions and identify the NNI output failures.
3. For the ICS, propagate the NNI signals through the ICS, and add control device power failure effects.
4. From the above predict net effects.

Based on our review of the results, we have recommended several design changes to further decrease the NNI/ICS vulnerability to power supply failures.

RESPONSE FOR ITEM c)

As a result of our expanded scope review, the following design modifications have been proposed.

1. Modify the control circuits for the Pressurizer Power Operated Relief Valve to ensure that the valve will not stay open on loss of NNI power. This modification will be completed prior to startup following our current refueling outage now scheduled to end June, 1980.

RESPONSE FOR ITEM c (Continued)

2. Modify the control circuits associated with the pressurizer heaters to prevent the heaters from being energized on loss of NNI power. (Schedule the same as item 1).
3. An additional source of AC power and additional DC power supplies are being provided for the NNI 24VDC buses to enhance the reliability of the 24VDC buses. (Schedule is the same as item 1).
4. A redundant source of AC power will be added to the startup feedwater control valves, the main feedwater control valves, and to the turbine bypass valves, this will provide increased reliability to these valves to ensure that they are functional on loss of the single source. This modification will be implemented during our second refueling outage currently scheduled for the fall of 1981.
5. For instrument strings required for cold shutdown, the associated power supplies will be made redundant if only one instrument is providing the information for a given parameter. Schedule for implementation will be the same as item 4.

REQUEST

2. Prepare emergency procedures or review existing ones that will be used by control room operators, including procedures required to achieve a cold shutdown condition, upon loss of power to each Class 1E and non-Class 1E bus supplying power to safety and non-safety related instrument and control systems. The emergency procedures should include:
 - a) the diagnostics/alarms/indicators/symptom resulting from the review and evaluation conducted per item 1 above.
 - b) the use of alternate indication and/or control circuits which may be powered from other non-Class 1E or Class 1E instrumentation and control buses.
 - c) methods for restoring power to the bus.

Describe any proposed design modification or administrative controls to be implemented resulting from these procedures, and your proposed schedule for implementing the changes.

RESPONSE FOR ITEM 2

Procedures have been reviewed and revised to detail the operator's action in the event of loss in indication and/or function. The Davis-Besse 1 operators will be trained on the procedures required for transition to cold shutdown. This will be completed prior to startup after the current refueling outage. Our continuing investigation and verification may precipitate additional procedural changes and/or design modifications. Those procedural changes defined prior to startup will be incorporated in the procedures, and the operators trained prior to startup. Any design modifications identified will be incorporated on a schedule consistent with safety consideration.