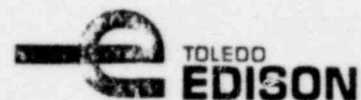


TIC



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

Docket No. 50-346
License No. NPF-3
Serial No. 1-116
March 3, 1980

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 partial 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.

Attached are Toledo Edison's responses available to date. Several of the items of the Bulletin are still being evaluated. The projected schedule completion dates are provided.

Very truly yours,

RPC:TJM

Attachment

MAR 5 1980

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

REQUEST

1. Review the class-1-E and non-class 1-E 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 1 a)

Below is a description of alarms and loss of power indication for each of the 120V instrument AC and DC distribution systems.

Class 1-E "Essential DC Distribution Panels"

Each of the four 125VDC essential distribution panels is provided with the following alarm indication in the control room to show a loss of power to the bus:

- a) Voltmeter monitoring bus voltage on the main control board.
- b) Undervoltage alarms on the station annunciator and station computer.
- c) Indication of the power source from which the panel is being fed at the main control board and on the station computer.

Class 1-E "Essential AC Distribution Panels"

Each of the four 120VAC essential distribution panels is provided with the following alarm indication in the control room to show a loss of power to the bus:

- a) Synchronizing reference signal disconnect alarm at the station annunciator and the station computer.

RESPONSE FOR ITEM 1 a) (continued)

- b) Voltmeter monitoring bus voltage on the main control board.
- c) Indication of the power source to which the panel is connected to at the main control board and on the station computer.

Non-Class 1-E "Regulated AC Panels"

Each of the regulated AC panels is provided with the following alarm indications in the control room to show a loss of power to the bus:

- a) Indication for breaker status of incoming power at the main control board.
- b) Indication of panels being fed from alternate source at the main control board.
- c) Voltmeter monitoring bus voltage on the main control board.
- d) Undervoltage alarms on the station annunciator and the station computer.

Non-Class 1-E "AC Uninterruptable Instrument Distribution Panels"

- a) Each of the AC uninterruptable instrument distribution panels is fed directly from the non-class 1-E inverters.
- b) A voltmeter is provided for each bus at the main control board.
- c) A loss of power to the bus would result from a failure of the inverter which would alarm on the station annunciator and the station computer.

Non-Class 1-E "DC Distribution Panels"

These panels do not have direct alarm indication in the control room. A loss of power to these panels would be indicated by multiple system alarms.

RESPONSE FOR ITEM 1 b)

We have identified the instrument and control system loads connected to each bus required to achieve cold shutdown.

The evaluation of the effects of loss of power to these loads has not yet been completed. We anticipate that this extensive evaluation will be completed by April 15, 1980.

RESPONSE FOR ITEM 1 c)

The determination of any proposed design modifications, and a schedule for implementation will be available when the evaluation in item 1 b) is completed.

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 1-E and non-class 1-E bus supply 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 1-E or class 1-E 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

The review of emergency procedures will be completed when the information from the evaluation described in item 1 b) is available. We anticipate that the review of the procedures, and any proposed changes or system modifications resulting from the review will be available 30 days after the evaluation is completed.

REQUEST

3. Re-review IE Circular No. 79-02, Failure of 120 Volt Vital AC Power Supplies, dated January 11, 1979, to include both class 1-E and non-class 1-E safety related power supply inverters. Based on a review of operating experience and your re-review of IE Circular No. 79-02, describe any proposed design modifications or administrative controls to be implemented as a result of the re-review.

RESPONSE FOR ITEM 3

Our re-review of IE Circular 79-02 was completed.

- a) Time delay circuitry is not utilized in the design of our inverter units. Transfer of those inverters which have an alternate source is accomplished by frequency change.
- b) The preoperational test program, combined with the resolution of problems which occurred early in our startup program, has ensured the proper tuning of the inverter circuitry. We have not experienced problems during transient loading conditions.

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RESPONSE FOR ITEM 3 (continued)

- c) We do employ administrative controls which ensure operability of safety systems after they have been subjected to maintenance or testing.

Based on the above we do not have any recommended design changes for the inverter systems at this time.