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DOCDATE: 07/24/78
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DOCTYPE: LETTER NOTARIZED: NO
SUBJECT:
FURNISHING APPLICANT"S PLANS FOR THE LOSS OF OFFSITE PWR TEST TO BE PERFORMED AT SUBJECT FACILITY.

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July 24, 1978

Docket No. 50-346

License No. NPF-3

Serial No. 452

TOLEDO EDISON

LOWELL E. ROE
Vice President
Facilities Development
(419) 259-5242

Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz, Chief
Light Water Reactors Branch #1
Division of Project Management
United States Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Stolz:

This letter provides our plans for the loss of offsite power test to be performed at Davis-Besse Nuclear Power Station Unit 1. We agreed to provide this information to you during a telephone call on July 14, 1978, with Mr. L. Engle and other members of the NRC staff. This information will also provide the basis for a meeting with the NRC staff on August 1, 1978, to resolve this matter. We plan to conduct this test in approximately 60 days. We, therefore, request your assistance in the expeditious resolution of any comments the NRC staff may have on our plans.

The objective of the loss of offsite power test (our TP 800.26) is to prove that after a loss of offsite power, primary plant conditions are safely maintained. That is, the primary plant can control the transient and remove decay heat from the reactor core.

Our test plans are similar to the tests conducted at Crystal River (CR) and Arkansas Nuclear One. The following is an outline of our test method, along with the basis for our position:

1. The station is on line with power between 15 and 20%. Housepower is being supplied by the auxiliary transformer.

2. One makeup pump, one service water pump and one component cooling water pump are in service and supplying cooling water to the reactor coolant pump (RCP) seals. This is a design requirement to prevent damage to the RCP seals.

3. Lighting substations are deenergized, resulting in a loss of lighting to all sections of the station.

4. An essential bus (C1) is deenergized. Diesel generator 1-1 will automatically start on undervoltage and supply C1 bus. Verification will be made that a second component cooling water pump and a second service water pump automatically start. The next step is to start a second makeup pump.

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5. The auxiliary boiler is now placed in service to be ready to pick up gland steam and steam jet air ejector steam loads. This is necessary to protect the turbine from air inrush through the glands.

6. The loss of offsite power test is initiated by simultaneously performing the following actions. All four RCP's are tripped. Essential bus D1 is deenergized. The operating main feed pump is tripped. All non-essential pressurizer heaters are turned off. Because initiation of the test should result in actuation of the reactor protection system and the steam and feedwater rupture control system (SFRCS), there will be auxiliary feedwater flow to both steam generators. The actuation of SFRCS, which is unique to Davis-Besse Unit 1 compared to other operating plants, will cause the main steam isolation valves to close. It is the SFRCS which effectively isolates the primary and secondary systems from each other. Therefore, the status of secondary system equipment will not interact with the primary system and affect the test results.

For additional description of the SFRCS, see Exhibit 7C (pages 49-55) of our supplement to reportable occurrence NP-32-77-16. This supplement was transmitted by our letter dated November 14, 1977, Mr. T. D. Murray to Mr. J. G. Keppler (with copies to Dr. E. Volgenau and Mr. W. G. McDonald).

7. Station blackout procedures will be used to establish stable conditions. The acceptance criteria for the test are that stable conditions (cooling down) are maintained for at least 30 minutes and no technical specification limits are exceeded.

There are certain other loads we plan to keep energized during the test. We believe these loads are necessary to prevent probable damage to station equipment. We firmly believe these loads will have no adverse effect on meeting the objectives of the test. These miscellaneous loads are as follows:

1. A control rod drive cooling water booster pump (as was done at CR) will be operating to prevent overheating the control rod drive stators.

2. Condensate demineralizer holdup pumps will be energized to avoid dumping the polisher resins.

3. Water treatment equipment will be operated to protect the clarifiers.

4. Heat tracing and boric acid addition tank room heaters will be energized to prevent crystalization of the boric acid.

5. Circulating water pumps and condensate pumps will be operated as necessary to maintain condenser vacuum and protect the turbine glands from damage.

6. Main feed pump turbine turning gears will be energized to prevent damage to this turbine.

7. An instrument air compressor will be operated as was done at CR.

We request that, following our meeting on August 1, you inform us in writing of your approval of our plans for the loss of offsite power test (TP 800.26).

Very truly yours,

Lowell Roe