TOLEDO EDISON

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Docket No. 50-346

License No. NPF-3

Serial No. 1094

October 19, 1984

Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz
Operating Reactor Branch No. 4
Division of Operating Reactors
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Stolz:

This is in response to your letter dated October 12, 1984 (Log No. 1622) concerning Cycle 5 Reload Analysis; Request for Additional Information. The attachment provides Toledo Edison's response for Davis-Besse Nuclear Power Station Unit 1.

Very truly yours,

RPC:GAB

sc d/3

cc: DB-1 NRC Resident Inspector

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Questions Concerning Davis-Besse Cycle 5 Reload

QUESTION 1: In a letter from T. C. Baldwin of B&W to Dale Powers of NRC dated January 8, 1983, concerning alternate vendor's fuel pellets in reload batches, it was stated that 8 test rods with alternate vendor's fuel pellets are being used in the ANO-1 Cycle #6. This letter also stated that B&W would provide a written description and assurance of maintenance for this fuel of material properties used in core performance codes.

In the letter from J. H. Taylor of B&W to J. F. Stolz of NRC dated September 17, 1984 it was stated that fuel pellets manufactured by G.E. would be used in DB-1, Cycle 5 and that:

1. There would be no impact on models or methods used in evaluating the safety of the reactor, and

2. The material properties and dimensional requirements were established by B&W.

It is not fully clear whether B&W intends to continue a QA check on this fuel from G.E. or whether the responsibility rests on G.E. Please clarify.

RESPONSE: B&W intends to continue QA checks on GE fuels for all future batches.

QUESTION 2: In the Cycle 5 reload report (B&W - 1827) in Section 4.1, Fuel Assembly Mechanical Design (Page 4-1), a description is given for the new Mark-B5 upper end fitting modifications (spider and spring). Is this a total new end fitting? Is the surveillance on the springs going on now (old design) and, if so, will the surveillance continue for the new design?

RESPONSE: The Mark B-5 upper end fittings is not entirely new. The old fitting uses holddown springs made of Inconel 750 with 15/32 inch spring wire. The new holddown spring uses Inconel 718 with 1/2 inch gage wire. Toledo Edison intends to continue visual inspection programs on the new fuel holddown springs.

QUESTION 3: In the previous Cycle 4 for DB-1, the SER stated, in regards to the thermal behavior of the fuel, that the TAFY-3 and TACO-2 codes were used and NRC raised a concern that only the newer TACO series codes were capable of correctly calculating fission gas release (and therefore rod pressure) at high burnups. B&W responded that fuel rod

pressure predicted by TACO-1 is lower than that predicted by TAFY-3 for fuel rod exposures of up to 42 MWd/kgU and that the expected exposure of any fuel rod during Cycle 4 is less than this amount. What is the comparable situation for Cycle 5?

RESPONSE: There is no change in analysis methodology for fuel rod pin pressure calculations from Cycle 4 to Cycle 5. The calculated results for Cycle 5 shows that the fuel rod pressure will be acceptable for rod exposure up to 45,000 MWD/MTU.

QUESTION 4: Give a comparison of the flux - Δ flux/flow trip setpoints for Cycle 4 and 5.

RESPONSE: The flux - Δ flux/flow setpoints for Cycle 4 and Cycle 5 can be found in pages 8-12 and 8-11 of the corresponding cycle reload report.

QUESTION 5: For Cycle 4 it was stated that the most recent reactor coolant flow rate measured was 387,200 gpm. What is the most current measured reactor coolant flow rate?

RESPONSE: The 387,200 gpm flow rate as indicated in Cycle 4 reload report is not the "measured" flow rate. It is the flow rate corresponding to 110% of the design RCS flow rate which is the design condition for reload analysis. The latest measurement showed that the RCS flow rate is at 404,308 gpm.