



Docket No. 50-346

License No. NPF-3

Serial No. 1085

October 5, 1984

RICHARD P. CROUSE
Vice President
Nuclear
419/259-5221

Mr. Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Eisenhut:

This is in response to your letter dated July 2, 1984 (Log No. 1546), concerning Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability (Generic Letter 84-15). Toledo Edison will submit changes to the Technical Specifications to accomplish a reduction in the number of cold fast starts.

Attached is the Toledo Edison response to your letter as it relates to the Davis-Besse Nuclear Power Station, Unit 1. This includes some comments on the Staff proposed technical specification. In general, Toledo Edison feels that these are not appropriate for Staff issuance at this time.

Very truly yours,

A handwritten signature in dark ink, appearing to be 'R. Crouse'.

RPC:DSB:SGW:lrh
Attachment

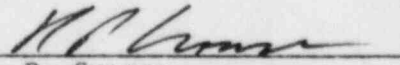
cc: DB-1 NRC Resident Inspector

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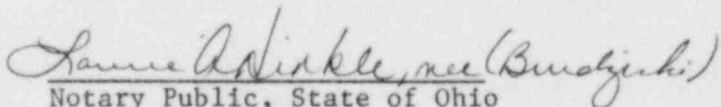
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10 CFR 50.54(f)
SUBMITTAL IN RESPONSE
FOR
DAVIS-BESSE NUCLEAR POWER STATION
UNIT NO. 1
FACILITY OPERATING LICENSE NO. NPF-3

This letter is submitted in conformance with 10 CFR 50.54(f) relating to Mr. D. G. Eisenhut's letter of July 2, 1984 (Log No. 1546). This deals with Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability (Generic Letter 84-15).

By 
R. P. Crouse
Vice President, Nuclear

Sworn to and subscribed before me this 5th day of Oct. , 1984.


Notary Public, State of Ohio

Laurie A. BRUDZINSKI
Notary Public, State of Ohio
My Commission Expires May 16, 1986

Response to Generic Letter 84-15

PROPOSED STAFF ACTIONS TO IMPROVE AND MAINTAIN
DIESEL GENERATOR RELIABILITY (Generic Letter 84-15)

Item 1: Reduction in number of cold fast start surveillance tests
for diesel generators.

Response: Toledo Edison's current practice to avoid cold fast starts is to schedule the preventative maintenance to coincide with the performance of monthly surveillance testing whenever possible to avoid repetitive starting of the diesel generators to demonstrate operability.

Toledo Edison proposes to reduce the number of cold, fast starts by requesting a change in the Technical Specifications which would require a start from ambient conditions with a testing interval longer than the current 31 days. In addition, we propose that other starts for surveillance testing purposes be preceded by procedures recommended by the manufacturer to minimize mechanical stress and wear.

Item 2: Diesel Generator Reliability Data

Response: The reliability data of Davis-Besse's diesel generators for the last 20 and 100 demands is presented below:

-20 Demands-

<u>Engine No.</u>	<u>Reliability</u>	<u>No. of Failures</u>	<u>Date of Failures</u>
1	95%	1	5-25-84
2	100%	0	--

-100 Demands-

<u>Engine No.</u>	<u>Reliability</u>	<u>No. of Failures</u>	<u>Date of Failures</u>
1	96%	4	3-4-83, 5-27-83, 6-8-83, 5-25-84
2	99%	1	3-1-81

A record of diesel generator start attempts is maintained in the operator's logs, and various operating data is logged by the operators during the performance of the surveillance tests. These data are filed by the Operations Department as part of the Station records.

Toledo Edison does not maintain a record which itemizes the demands and failures experienced by each diesel generator as outlined in Section C.3.a in Regulatory Guide 1.108, Revision 1, dated August 1977.

A yearly data report indicating each diesel generator's reliability is not maintained per Regulatory Guide 1.108, Revision 1, at this time.

Item 3: Diesel Generator Reliability

Response: Toledo Edison's reliability experience as described above is greater than 95%. However, Toledo Edison has already in existence, a reliability program for the continuation of the high reliability of the diesel generators. This program includes:

1. Emphasis on operations and maintenance personnel training by qualified instructors both from Toledo Edison and Electromotive Division of General Motors, the manufacturer.
2. Use of procedural guidelines which minimize light load and/or no load operation.
3. Emphasis on performing preventative maintenance on the diesel generators, consistent with NUREG CR-0660 and the manufacturer's recommendations.
4. Implementation of engine modifications to improve reliability, including:
 - a. Modifications to engines' control systems to regulate the fast start acceleration rate during startup to 8-9 seconds versus 4-5 seconds, as was the previous practice.
 - b. Provisions for an "idle start and stop" feature, with an automatic override in an emergency. This allows the diesel generator to start, run at idle speed, accelerate to full speed from idle, and allows for a 10-minute stabilization period at idle before shutdown.

These modifications follow manufacturer's guidelines in reducing stress and wear on the engines.

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5. A proposed modification to the lube oil system to provide additional oil flow to the turbocharger bearings during fast starts has been recommended by the manufacturer. A Facility Change Request has been generated to accomplish this.

In addition to the above program, Toledo Edison has incorporated in whole or in part many of the recommendations given in NUREG CR-0660 to improve diesel generator reliability.

It is Toledo Edison's opinion that the program outlined above will maintain a high degree of reliability for the Davis-Besse diesel generators.

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COMMENTS ON PROPOSED PERFORMANCE TECHNICAL SPECIFICATION

Toledo Edison offers the following comments on Attachment to Enclosure 3, Example of Diesel Generator Performance Technical Specifications:

Under "Surveillance Test Frequency":

Item a:

The normal plant surveillance frequency is acceptable if the surveillance test is conducted from an idle condition to full load and back to idle, following the manufacturer's recommended practices.

Item b:

Toledo Edison questions the need for performing both seven consecutive failure-free demands and maintaining less than or equal to one failure in twenty attempts under the accelerated plant surveillance mode. This proposed accelerated test frequency could impose excessive surveillance testing. Increased surveillance testing increases the probability of failure due to accelerated, unnecessary wear and stress placed on the diesel generator.

Under "Remedial Action Criteria":

No comment.

Under "Requalification Criteria":

The last sentence referencing diesel generator requalification. Toledo Edison feels that a test interval of not more than once every 12 hours is more reasonable, given plant maintenance and operations considerations.

Toledo Edison again questions the need for performing so many surveillance tests to requalify the affected diesel generator. Our reasons are the same as stated in Item 2, above.

Under "Failure to Requalify a Diesel Generator:

No comment.

Under "Diesel Generator Inoperability Limits":

We are unsure what is meant by the "yearly limit upon total cumulative time..." concept. Further clarification is needed before we can comment.

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Under "Valid Demands and Failures":

We are concerned about using Regulatory Guide 1.108, position C.2.e. to determine valid demands and failures. Using position C.2.e.7 guidelines, a verification test run following corrective maintenance which fails would be counted as an additional failure. However, the reason for failure could be due to the maintenance actions. A verification test is used to ensure that the system is able to be returned to operation. This validates that the corrective maintenance is effective in eliminating the root cause as well as ensuring that the maintenance activity did not introduce any additional failure mechanisms. Regulatory Guide 1.108 appears to be too restrictive in determination of failures.

Under "Reliability Records":

No comment.