

**Detroit  
Edison**

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September 28, 1992  
NRC-92-0093

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

References: 1) Fermi 2  
NRC Docket No. 50-341  
NRC License No. NPF-43

Subject: Proposed Technical Specification Change (License  
Amendment) - Emergency Diesel Generator Fuel Oil Testing

Pursuant to 10CFR50.90, Detroit Edison Company hereby proposes to amend Operating License NPF-43 for the Fermi 2 plant by incorporating the enclosed changes into the Plant Technical Specifications. The proposed change updates the standards used to specify test methods for the Emergency Diesel Generator (EDG) fuel oil.

Detroit Edison has evaluated the proposed Technical Specifications against the criteria of 10CFR50.92 and determined that no significant hazards consideration is involved. The Fermi 2 Onsite Review Organization has approved and the Nuclear Safety Review Group has reviewed the proposed Technical Specifications and concurs with the enclosed determinations. In accordance with 10CFR50.91, Detroit Edison has provided a copy of this letter to the State of Michigan.

If you have any questions, please contact Mr. Glen D. Ohlemacher at (313) 586-4275.

Sincerely,



Enclosure

cc: T. G. Colburn  
A. B. Davis  
M. P. Phillips  
S. Stasek  
Supervisor, Electric Operators, Michigan  
Public Service Commission - J. R. Padgett

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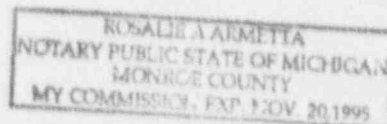
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I, WILLIAM S. ORSER, do hereby affirm that the foregoing statements are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

William S. Orser  
WILLIAM S. ORSER  
Senior Vice President

On this 28th day of September, 1992, before me personally appeared William S. Orser, being first duly sworn and says that he executed the foregoing as his free act and deed.

Rosalie A. Armetta  
Notary Public



## INTRODUCTION

The purpose of this proposal is to update the testing standards specified in Technical Specifications (TS) 4.8.1.1.2.c and 4.8.1.1.2.d for the Emergency Diesel Generators (EDG). TS 4.8.1.1.2.c provides testing requirements for samples of new fuel oil taken prior to addition of the fuel oil to the fuel oil storage tanks. TS 4.8.1.1.2.d provides a monthly test of fuel oil in the fuel oil storage tanks for particulate contamination.

Recently, Detroit Edison encountered difficulty in obtaining a laboratory analysis required by these TS. The cause of this difficulty was that the testing standard specified had become out-dated and generally fallen into disuse. Although this difficulty was overcome; this TS change is being submitted to generally update the testing standards in this area.

## EVALUATION

Four changes in standards are proposed:

- a. The fuel oil sampling methodology is updated from ASTM D4057-81 to ASTM D4057-88.
- b. The standard for verification of fuel oil properties is updated from ASTM D975-81 to ASTM D975-91. Associated with this update is the deletion of ASTM D1552-79 and ASTM D2622-82 since these test methods have been incorporated into ASTM D975-91.
- c. The standard for visual inspection for fuel oil appearance and color is updated from ASTM D4176-82 to ASTM D4176-86.
- d. The standard for sampling and verifying total particulate contamination of stored fuel oil is updated from ASTM D2276-78 to ASTM D2276-88.

Each of these changes is discussed individually below:

### **Fuel Oil Sampling Methodology - ASTM D4057.**

TS 4.8.1.1.2.c currently specifies ASTM D4057-81 as the methodology for sampling new fuel oil prior to its addition to the fuel oil storage tanks. ASTM D4057 has been revised to the current revision, ASTM D4057-88. The 1988 revision does not change the methodology used to sample new fuel shipments. Therefore, this change is administrative in nature. The change eliminates the administrative burden of maintaining compliance to an obsolete standard.

#### Fuel Oil Properties - ASTM D975.

TS 4.8.1.1.2.c.1 and 2 provide tests to be performed on raw fuel oil, TS 4.8.1.1.2.c.1 specifies tests to be performed prior to addition of the fuel oil to the storage tanks and TS 4.8.1.1.2.c.2 specifies tests to be completed within 31 days of obtaining the sample. ASTM D975-81 is currently specified in both of these TS. ASTM D975-81 has been superseded by ASTM D975-91.

ASTM D975-91 differs in the methodologies used for determining the calculated Cetane Index and the sulfur content. Both of these properties are required to be determined by TS 4.8.1.1.2.c.2 within 31 days of obtaining a sample.

The 1991 methodology for determining the Calculated Cetane Index considers two additional factors, the 10% and 90% distillation temperatures. These are in addition to the 50% distillation temperature and density factors utilized in the 1981 methodology. The inclusion of these two factors yields a more representative index.

Currently the TS require analysis for sulphur content by one of three methods: ASTM D975-81, ASTM D1552-79 or ASTM D2622-82. ASTM D975-91 has incorporated the ASTM D1552 and ASTM D2622 methods.

In addition, ASTM D975-91 allows the use of ASTM D4294. D4294 is a non-dispersive x-ray fluorescence method which has a lower minimum sensitivity to fuel oil sulphur content and greater accuracy than the other currently allowed methods.

The specification of ASTM D975-91 will allow Detroit Edison to utilize the improved methods which have been incorporated into this standard. The change also will eliminate the burden of maintaining compliance with an obsolete standard.

#### Appearance and Color - ASTM D4176.

The proposed TS change updates the reference to ASTM D4176 from the 1982 version to the current 1986 version. The new version does not change the test methodology nor affect the ability of the required test to detect abnormal conditions in the fuel oil. Updating the standard also eliminates the burden of maintaining compliance to an obsolete standard.

**Total Particulate Contamination - ASTM D2276.**

TS 4.8.1.1.2.d currently requires that a fuel oil sample be obtained from the storage tanks every 31 days in accordance with ASTM D2276-78 and checked for total particulate contamination using Method A of the same standard. The proposed TS change updates ASTM D2276 to the current 1988 version. The 1988 version does not change the required sampling or testing methodology. The change is therefore administrative in nature and eliminates the burden of maintaining compliance with an obsolete standard.

**NO SIGNIFICANT HAZARDS CONSIDERATION**

In accordance with 10CFR50.92, Detroit Edison has made a determination that the proposed amendment involves no significant hazards considerations. To make this determination, Detroit Edison must establish that operation in accordance with the proposed amendment would not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated, or 2) create the possibility of a new or different kind of accident from any accident previously evaluated, or 3) involve a significant reduction in a margin of safety.

The proposed change updates the standards used to specify test methods for the Emergency Diesel Generator (EDG) fuel oil and does not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated. The changes update the testing standards to more recent standards. The new standards are either more effective or equally effective in detecting unsatisfactory fuel oil. Therefore, the proposed change does not adversely impact the reliability of the EDGs. The EDGs will thus continue to function as designed and the probability and consequences of previously evaluated accidents is unaffected.
- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed changes do not involve a change in the design of any plant system or component nor do they involve a change in the operation of any plant system or component. The proposed changes do not reduce the level of diesel generator reliability nor do they function as initiating events of any accident. Since the performance, function, and redundancy of the original design remain unchanged, this change creates no potential for a new or different kind of accident.

- 3) Involve a significant reduction in a margin of safety. The changes do not impact any plant setpoints or the margins to any accident analysis limits. The proposed changes maintain the reliability of the EDGs and therefore maintain the current margin of safety.

Based on the above, Detroit Edison has determined that the proposed amendment does not involve a significant hazards consideration.

#### ENVIRONMENTAL IMPACT

Detroit Edison has reviewed the proposed Technical Specification changes against the criteria of 10CFR51.22 for environmental considerations. The proposed change does not involve a significant hazards consideration, nor significantly change the types or significantly increase the amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, Detroit Edison concludes that the proposed Technical Specifications do meet the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirements for an Environmental Impact Statement.

#### CONCLUSION

Based on the evaluation above: 1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and 2) such activities will be conducted in compliance with the Commission's regulations and proposed amendments will not be inimical to the common defense and security or to the health and safety of the public.