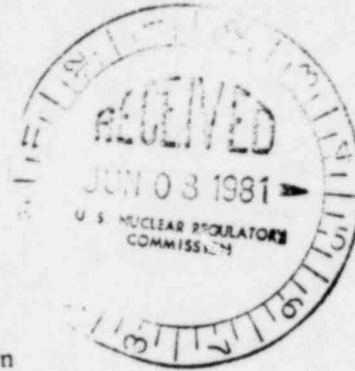


Detroit

EDISON

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June 6, 1981
EF2 - 53,475

Mr. L. L. Kintner
Division of Project Management
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Kintner:

Reference: Enrico Fermi Atomic Power Plant, Unit 2
NRC Docket No. 50-341

Subject: Regulatory Guide 1.133 - Loose Part Detection System -
Verbal Question from B. K. Sun

In response to Mr. Sun's request of June 5, 1981, Detroit Edison commits to revise its Appendix A compliance statement with Regulatory Guide 1.133. This revision will state Detroit Edison's degree of conformance with RG 1.133. A technical description will also be added to the appropriate section of the FSAR.

For your use, a technical description of the Fermi 2 Loose Parts Monitoring System is attached.

Sincerely,

William F. Colbert
Technical Director
Enrico Fermi 2

RMB

Attachment

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A

ENRICO FERMI UNIT 2 PROJECT
Instrumentation & Controls

1.0 Description of Loose Parts Monitoring System (LPM) B2107.

The LPM system used at the Enrico Fermi Atomic Power Plant Unit II is furnished by Babcock & Wilcox.

This system provides the capability to detect, alarm and record acoustic signals generated when loose parts within the reactor coolant system impact other reactor coolant system components. The system provides a contact output to the control room annunciator to notify the operator that a loose part has been detected.

2.0 The basic system is capable of performing the following functions:

2.1 Detect acoustic signals generated from mechanically attached sensors (accelerometers).

2.1.1 The eight (8) sensors are located as follows:

- * Vessel bottom CRD housing, two (2) sensors
- * Recirculating pumps inlet lines, one (1) sensor for each of the two (2) lines
- * Feedwater headers, one (1) sensor for each of two (2) headers
- * Steam headers, two (2) of the four (4) selected. One (1) sensor for each of the two (2) lines

2.2 The alarm logic is capable of distinguishing and identifying signals equivalent to 0.5 ft/lbs within 3 ft of the sensor from the plant background signal (signature). The alarm threshold is adjustable for each channel (sensor string). The logic is designed to minimize false alarms.

2.3 The alarm logic will give visual alarm alert.

- * contact to plant annunciator
- * one light per channel - local display

- 2.4 The alarm logic is capable of indicating the first channel to alarm and also to determine the four (4) most critical sensors signals/channels to be recorded on magnetic tape and loose part locator.
- 2.5 The alarm logic is capable of automatic starting of the magnetic tape recorder. Encoding of the tape will display the sensor/channel assignment during play back of the tape.
- 2.6 The system is capable of providing real time audio output and connection for visual presentation.
- 2.7 The system is capable of manually selecting channels for audio monitoring.
- 3.0 BOP power sources and tray systems are being used.
- 4.0 The sensors are mechanically attached per B&W design recommendation.
- 5.0 The NEMA 12 cabinet which contains the electronic logic is seismically qualified by analysis to be structurally sound.
- 6.0 Field experience with this system has shown a high degree of reliability.