

CHARLES CENTER . P. O. BOX 1475 . BALTIMORE, MARYLAND 21203

JOSEPH A. TIERNAN VICE PRESIDENT NUCLEAR ENERGY

March 28, 1986

	50-318
License Nos.	DPR-53
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	License Nos.

ATTENTION: Mr. Edward C. Wenzinger, Chief Projects Branch No. 3 **Division of Reactor Projects** 

Gentlemen:

This refers to Inspection Report 50-317/85-30, 50-318/85-32; which identifies apparent weaknesses in the maintenance of our Emergency Diesel Generators (EDG). We have conducted a thorough review of the inspection results and our related EDG maintenance and housekeeping practices.

Enclosure (1) to this letter is a written statement in reply to those and other concerns noted in your letter of January 14, 1986.

Should you have further questions regarding this reply, we will be pleased to discuss them with you.

Very truly yours, Afternar

JAT/SRC/dlm

Enclosure

cc: D. A. Brune, Esquire J. E. Silberg, Esquire D. H. Jaffe, NRC T. Foley, NRC

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## ENCLOSURE (1)

## REPLY TO NRC INSPECTION REPORT

#### 50-317/85-30; 50-318/85-32

#### **Emergency Diesel Generators**

Although the reliability and availability of the emergency diesel generators at Calvert Cliffs is high, a review of their appearance has resulted in the following actions:

- 1. All three emergency diesel generators have been placed under the responsibility of a single Assistant General Supervisor in our Nuclear Maintenance Department. An experienced diesel mechanic has been assigned to inspect and maintain all of the diesel generators. Assigning the responsibility for maintenance of the diesel generators to one maintenance group will ensure that the generic problems are more easily identified and corrected.
- All emergency diesel generators will be steam cleaned and inspected for leaks. Any leaks identified will be corrected and all three diesel generators will be repainted. This was done to No. 11 emergency diesel generator on February 15, 1986 and is expected to be completed for No. 12 emergency diesel generator by March 15, 1986, and No. 21 emergency diesel generator by April 15, 1986.
- The dedicated diesel mechanic will be notified prior to any planned diesel generator runs, so he can observe diesel operation. He will identify and correct any leaks that may be found during operation.
- 4. A vendor recommendation to minimize gasket weepage is being evaluated to determine applicability to our operating conditions. We are evaluating the recommendation for rotating the engine over after shutdown to ensure that any residual oil in the cylinders is expelled from the cylinders and not allowed to leak past the upper pistons out to the exhaust manifolds. This recommendation is under review to determine effects on overall diesel generator reliability and personnel safety. This evaluation will be completed by June 1, 1986.
- 5. An on-site System Engineer has been assigned to assist in researching state-of-the-art gasket materials and bolting practices to eliminate the minor leaks characteristic of the Fairbanks-Morse opposed piston diesal engine. This research will be completed by June 1, 1986. This System Engines: also reviews industry and NRC information on diesel generators for applicability to our diesel operation and maintenance practices.
- The System Engineer has been assigned to review the pre- and postoperation checklists to verify that vendor requirements are incorporated, as appropriate. This review will be completed by June 1, 1986.

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In respect to the possible jacket cooling system internal leakage, we are very aware of the potential for damage and share your concern. We will devote appropriate resources toward verifying and correcting the source of the leakage.

Although the diesels may externally appear worn or used, this has not affected their performance. All three emergency diesel generators exceed a start reliability of 95%. Furthermore, the vendor recommendations concerning periodic internal inspections and overhaul are rigidly followed to ensure their excellent performance is maintained.

We believe the above actions fully address the diesel generator concerns in the subject report.

#### Instrument and Control Technician Work Practices

We recognize that the Instrument and Control Technician work practices are deficient in some areas. We have taken corrective action on this subject.

#### Reactor Coolant Pump Seal

Our inspection of the most recently failed Reactor Coolant Pump (RCP) seal was performed by the Nuclear Maintenance Department with the System Engineer and RCP seal consultant. There were no indications of a failure that could be attributed to the assembly and installation of the RCP seal. The RCP seal vendor has reviewed all asfound conditions and has not been able to determine the root cause of the failure.

A RCP seal task force was established in December 1985 to enhance our previous efforts in improving maintenance, operation, and design of RCP seals. As part of their charter, the task force is reviewing the following areas:

- All operation and maintenance procedures associated with the RCP seal;
- 2. The RCP seal overhaul work area and parts storage area;
- 3. State-of-the-art inspection and lapping equipment; and
- 4. Vendor technical training services for RCP seal assembly work practices, using the latest inspection and lapping equipment.

It is expected that the accepted task force recommendations will be implemented by October 1986.

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## Intake Structure

The intake structure has been given a high priority on the 1986 preservation schedule. A review of surface preparation and protective coating practices is being made to ensure that the best practices and materials are being used to withstand the corrosive saltwater atmosphere found throughout the circulating water pump intake structure. Furthermore, the circulating water pump motor air coolers are under engineering review for replacement due to their history of chronic saltwater leakage.