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NUCLEAR ENGINEERING SERVICES DEPARTMENT
CALVERT CLIFFS NUCLEAR POWER PLANT
LUSBY, MARYLAND 20657

August 22, 1989

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Supplemental Response to NRC Bulletin 88-04, "Potential Safety-Related
Pump Loss"

REFERENCES: (a) Letter from Mr. J. A. Tiernan (BG&E) to NRC Document Control
Desk, dated July 5, 1988, Response to NRC Bulletin 88-04,
Potential Safety-Related Pump Loss

(b) Letter from Mr. J. A. Tiernan (BG&E) to NRC Document Control
Desk, dated December 21, 1988, Revised Schedule for Completing
Action Items in Response to NRC Bulletin 88-04, Potential
Safety-Related Pump Loss

Gentlemen:

As required by NRC Bulletin 88-04, "Potential Safety-Related Pump Loss," we presented you with the results of our evaluation of minimum flow configurations and capacities of major safety-related centrifugal pumps installed at Calvert Cliffs (Reference a). We also committed to completing all remaining outstanding items by December 31, 1988. All of our action items, except for Service Water (SRW) pumps, were completed on schedule (See Attachment 1).

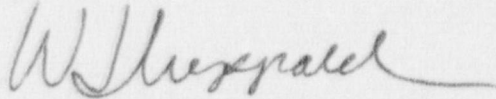
By letter dated December 21, 1988, (Reference b), we informed you of the need to extend the completion date of our SRW pump evaluation to June 30, 1989. Our SRW pump supplier had requested we undertake a testing program to evaluate pump vibration levels at reduced flow rates after having initially agreed upon a minimum flow requirement. This action item was also completed on schedule (See Attachment 2). These actions complete our response to the subject bulletin.

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

Very truly yours,

A handwritten signature in dark ink, appearing to read 'W. J. Lippold', with a long horizontal flourish extending to the right.

W. J. Lippold
General Supervisor
Technical Services Engineering

WJL/GLB/gla

cc: D. A. Brune, Esquire
J. E. Silberg, Esquire
R. A. Capra, NRC
S. A. McNeil, NRC
W. T. Russell, NRC
V. L. Pritchett, NRC
T. Magette, DNR

ATTACHMENT (I)

SUPPLEMENTAL RESPONSE TO NRC BULLETIN 88-04, POTENTIAL SAFETY-RELATED PUMP LOSS

The following action items were completed by December 31, 1988.

1. CONTAINMENT SPRAY (CS) PUMPS

ACTION ITEM

The pump Preventive Maintenance (PM) instructions will be modified to reflect the augmented inspection.

ACTION TAKEN

The CS Pump PM instructions have been revised to require an augmented inspection every five years.

2. STEAM-DRIVEN AUXILIARY FEEDWATER (SDAFW) PUMPS

ACTION ITEM

The pump PM instructions will be modified to reflect the augmented inspection.

ACTION TAKEN

The SDAFW pump PM instructions have been revised to require an augmented inspection every five years.

3. SALTWATER (SW) PUMPS

ACTION ITEM

Vendor Recommendations will be finalized and implemented, as appropriate, and operating instructions (OI) will be modified, as necessary.

ACTION TAKEN

The SW pump supplier confirmed the adequacy of our SW pump minimum flow requirements and did not require any change in normal maintenance schedules. The SW OI has been revised to specify a range of SW header pressures to ensure required pump minimum flow.

ATTACHMENT (2)

SUPPLEMENTAL RESPONSE TO NRC BULLETIN 88-04, POTENTIAL SAFETY-RELATED PUMPOSS

The following action item was completed by June 30, 1989.

SERVICE WATER (SRW) PUMPS

ACTION ITEM

Undertake a testing program to evaluate pump vibration levels at reduced flow rates. Evaluate the results and obtain concurrence from the pump supplier. Implement changes, as necessary, for maintaining minimum pump flow.

ACTION TAKEN

The SRW pumps were tested at reduced flow rates. The vibration data collected was sent to our SRW pump supplier for analysis. They confirmed the adequacy of our SRW pump minimum flow requirements and did not require any change in normal maintenance schedules. No change to the SRW pump operating instruction was required because the SRW pumps would not normally be operated below the required minimum pump flow.

(Note: Subsequently, we have decided to revise the SRW pump OI to document the minimum flow requirement to preclude the possibility of a future system modification or abnormal operating configuration allowing a lower flow).