

CHARLES H. CRUSE  
Plant General Manager  
Calvert Cliffs Nuclear Power Plant

Baltimore Gas and Electric Company  
Calvert Cliffs Nuclear Power Plant  
1650 Calvert Cliffs Parkway  
Lusby, Maryland 20657  
410 586-2200 Ext. 4101 Local  
410 260-4101 Baltimore



September 7, 1995

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  
Fire Pump Special Report  
Technical Specification 3.7.11.1.a ACTION Statement a

In accordance with our Technical Specifications 3.7.11.1.a ACTION Statement a, please find attached a Special Report concerning an inoperable high pressure pump to our fire suppression water system. Specifically, the Number 12 Diesel Fire Pump was inoperable for greater than seven days.

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

Very truly yours,

CHC/CDS/bjd

Attachment

cc: D. A. Brune, Esquire  
J. E. Silberg, Esquire  
L. B. Marsh, NRC  
D. G. McDonald, Jr., NRC  
T. T. Martin, NRC  
P. R. Wilson, NRC  
R. I. McLean, DNR  
J. H. Walter, PSC

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## ATTACHMENT (1)

### DIESEL FIRE PUMP -- SPECIAL REPORT

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#### BACKGROUND

Technical Specification 3.7.11.1 requires that the fire suppression water system shall be OPERABLE with:

- a. Two high pressure pumps, each with a capacity of 2500 gpm, with their discharge aligned to the fire suppression header,
- b. Two water supplies, each with a minimum contained volume of 300,000 gallons, and
- c. An OPERABLE flow path capable of taking suction from the pretreated water storage tanks Numbers 11 and 12 and transferring water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves and the first valve ahead of the water flow alarm device on each sprinkler, hose standpipe or spray system riser required to be OPERABLE per Technical Specifications 3.7.11.2, 3.7.11.4, and 3.7.11.5.

As specified by Technical Specification 3.7.11.1.a ACTION Statement a, with one pump and/or one water supply inoperable, restore the inoperable equipment to an OPERABLE status within 7 days or prepare and submit a Special Report to the Commission within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.

On August 1, 1995, the No. 12 Diesel Fire Pump for the fire suppression water system was disabled. Diesel Fire Pump No. 12 is one of the two high pressure pumps discussed in Technical Specification 3.7.11.1.a. The diesel fire pump was disabled during the performance of surveillance testing to verify the fire pump meets the capacity test requirements for Surveillance Requirement 4.7.11.1.f.2 after a malfunction in the fire suppression water system. On August 8, 1995, the disabled diesel fire pump had not been returned to service and exceeded the seven day requirement to submit this Special Report.

#### CAUSES OF INOPERABLE DIESEL PUMP

On August 1, 1995 with Units 1 and 2 at 100 percent power, the No. 12 Diesel Fire Pump was disabled during the performance of the fire pump capacity testing. To perform the capacity testing properly, the valve line-up for the fire pump requires closing several valves. When valve 0-FP-677 (the diesel fire pump pressure regulating relief valve return line isolation) was shut, the sight glass in the waste cone broke and water was discharged inside the fire pump house. Water was sprayed on the diesel engine and entered the intake manifold and turbo charger. The diesel engine was shut down and inspected for possible damage. The inspection identified problems with the turbo charger. The turbo charger was rebuilt and reinstalled. A test run was then conducted to verify operability. During the test run, the diesel engine experienced a mechanical failure and remained disabled. A root cause analysis was initiated to determine cause of the mechanical failure. A preliminary investigation has determined the possible cause to be insufficient workmanship during reassembly.

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### DIESEL FIRE PUMP -- SPECIAL REPORT

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#### PLANS AND PROCEDURES

1. An investigation of the waste cone sight glass was conducted and a new waste cone with sight glass was installed. A Root Cause Analysis has been initiated to determine cause of the failure.
2. The diesel fire pump engine was rebuilt and testing was completed satisfactorily. The diesel fire pump was declared operable on September 1, 1995.
3. The root cause analysis to determine the cause of the mechanical failure will be completed.
4. The other Technical Specification high pressure pump (electric driven fire pump) remains inservice. Per our Operating Instructions, an operator was designated on the Shift Turnover Sheet to lock open the fire main cross-connect from the Outside Building Complex in the case of a fire or loss of the Technical Specification electric driven fire pump. The fire main cross-connect from the Outside Building Complex has an electric and a diesel fire pump. Each of these pumps is rated at 1500 gpm.