DMB

PRIORITY ROUTING

First		Second	
DRA	Lee	DRC	
DPA		DETC	
DRP		DRSA	
DRS	Lee	DRSS	
DRSS		DOL	
DRHA		DOT	
		PAO	

orig+1 cy

FILE Lee

February 8, 1985

Mr. James G. Keppler
Regional Administrator
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Sir:

This special report is an update to the previous report of November 14, 1984, and is submitted in accordance with Byron Station, Unit 1 Operating License NPF-23, Appendix A, Technical Specification 4.8.1.1.3, reporting of diesel generator failures.

The number of diesel generator failures and valid tests since the completion of the preoperational test on 3/21/84 will be identified in terms of diesel generator units, (1A and 1B) and on a per nuclear unit basis. The criteria to determine valid tests and failures is in accordance with C.2.e of Regulatory Guide 1.108. The information on the diesel generator units was obtained from BOP DG-T5, START/STOP Data Sheets, maintained in the Main Control Room.

Since the last reporting of the Diesel Generator Failures, a re-evaluation of the 10 failures on the 1A Diesel Generator has been reduced to one common failure. This has occurred through conversations with Sang Rhow (NRR), John Streeter (Div. Director For Byron Proj. Div.), and Julian Hinds (NRC Resident Inspector). With this re-classification, the 1A Diesel Generator has had 2 failures in the last 58 valid tests since 3/28/84. The two failures were the results of fuel oil leaks severe enough to cause the Equipment Operator to shutdown the diesel generator. On 9/28/84 a normal start was initiated after which time the EO tripped the engine due to a fuel supply leak. The leak was later repaired. From 10/22/84 through 10/27/84, the 1A DG experienced one common (Fuel Line) failure. The problem was corrected by obtaining fully assembled fuel supply lines from Cooper Energy and implementing proper installation procedures.

The 56 successful tests performed on the 1A Diesel Generator consist of operating surveillances, Technical Staff surveillances, and component demonstrations, which fall under the C.2.e criteria outlined in Regulatory Guide 1.108. There has been one known occurrence of the 1A Diesel Generator starting successfully from an inadvertent SI signal during Hot Operations Testing on 7/28/84.

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The reliability of the 1B Diesel Generator was also evaluated based on the criteria outlined in Regulatory Guide 1.108 revealing 2 failures in the last 47 valid tests since 5/23/84. The failure that occurred on 5/23/84 was due to insufficient fuel prime of the 1B Diesel Generator. On 9/19/84, the diesel generator failed to crank due to a faulty tachometer which de-energized the starting solenoid valves. Corrective action was taken by proper priming of the diesel engine and replacing the faulty tachometer, respectively.

From a nuclear unit standpoint, the number of valid tests and failures are a combination of both diesel generator units, 1A and 1B. The above information summarizes the previous history of both engines and provides the groundwork for determining the test frequency outlined in Regulatory Guide 1.108. The total number of failures and valid tests since the completion of the preoperational test on 3/21/84 are 4 failures and 105 valid tests. Since the testing frequency of the Diesel Generators are based on the last 100 valid tests, the current figures are 3 failures in 100 valid tests. Therefore, to determine the diesel generators operable, they must be run at least once per 7 days by performing an operability surveillance. The diesel generators must complete 16 successful valid tests without a failure in order to return to a testing frequency of once per 31 days.

The overall reliability of the Diesel Generators prior to Fuel Load and from Fuel Load to initial criticality is summarized by the attached outline.

for R.E. Querio
Station Superintendent
Byron Nuclear Power Station

REQ/DP/rzd

cc: J. Hinds, NRC Resident Inspector
US NRC Document Control Desk, Washington D.C
INPO Record Center
CECo Distribution List

(0608M)

DIESEL GENERATORS

A. Prior to Fuel Load - Overall reliability 90%

1. Performance of 1A DG as classified in Reg. Guide 1.108. 90% reliability from 5/3/84 to 10/29/84.

   a. 2 Failures in 21 valid tests.

   - On 9/28/84 a normal start was initiated after which time the EO tripped the engine due to a fuel supply leak. Leak was later repaired.

   - From 10/22/84 through 10/27/84 the 1A DG experienced one common (Fuel Line) failure. The problem was corrected by obtaining fully assembled fuel supply lines from Cooper Energy and implementing proper installation procedures.

   * The other 19 runs were successful valid tests.

2. Performance of 1B DG as classified in Reg. Guide 1.108. 90% reliability from 5/23/84 to 10/28/84.

   a. 2 Failures in 21 valid tests.

   - On 5/23/84 a normal start was initiated after which time the engine failed to start. This was due to an insufficient prime of the engine. The engine was then properly primed and started successfully. Maintenance personnel are now required to perform a maintenance run of the engine upon completion of work related to starting the engine.

   - On 9/19/84 a normal start was initiated and the engine failed to start. This was due to a faulty tachometer. OAD investigated the problem and has since replaced the tachometer.

B. Fuel Load to Initial Criticality - Overall Reliability 100%

1. Performance of 1A DG as classified in Reg. Guide 1.108. 100% reliability from 11/7/84 to 2/5/85.

   a. 37 successful valid tests

2. Performance of 1B DG as classified in Reg. Guide 1.108. 100% reliability from 11/5/84 to 2/3/85.

   a. 26 successful valid tests

C. Current Status

* Combination of 1A and 1B DG

3 Failures in 100 valid tests requiring testing frequency of at least once per 7 days.