



**Commonwealth Edison**  
 Zion Generating Station  
 Shiloh Blvd. & Lake Michigan  
 Zion, Illinois 60099  
 Telephone 708 / 746-2084

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January 29, 1990

U. S. Nuclear Regulatory Commission  
 Document Control Desk  
 Washington, DC 20555

Dear Sir:

The enclosed Special Report number OSR/007/90, Docket No. ~~50~~-295/DPR-39 from Zion Generating Station is being transmitted to you in accordance with the requirements of Technical Specification 3.21.2.B.

Very truly yours,

*for* *T. A. Joyce*  
 T. P. Joyce  
 Station Manager  
 Zion Generating Station

TJP/rmd

Enclosure: Special Report

cc: NRC Region III Administrator  
 NRC Resident Inspector  
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January 25, 1990  
OSR/007/90

To: T. P. Joyce

Subject: On-Site Review of OB Diesel Fire Pump Inoperable Greater Than Seven Days.

On-Site review has investigated the inoperability of the OB Diesel Fire Pump. This report was prepared according to the requirements of Technical Specification 3.21.2.B.

On-Site Review has determined the following:

On December 28, 1989 at approximately 1800 hours, OB Diesel Fire Pump was found to have fuel oil in the lube oil system after performance of routine periodic testing (PT-201). This failure is presently under investigation (DVR 22-1-89-183) and is believed to be caused by wear between the injector body and plunger assemblies. This diesel is tested weekly and has been started more than 1500+ times since it was installed.

Repairs were begun the following morning under Work Request Z-88852. Due to the extended Unit 1 outage and availability of service representatives, the repairs were carried out on day shift only. Work is currently underway and is not complete because of the availability of parts for this model year and type of engine. (See Attachment A)

During the time OB diesel fire pump was inoperable, two service water booster pumps (each rated at 4000 gpm capacity) were operable to provide water to the site main ring header. OA fire pump, normally available for service, was undergoing modification testing to prove operability of a new NFPA mandated controller. While testing was underway, pump problems developed causing overheating and high amperage readings. This problem was investigated and the decision was made to remove OA Fire Pump and rebuild it on site. Repairs are underway and are pending on parts needed to complete the total overhaul.

In the event that neither service water booster pump nor the OA motor driven fire pump are available, the fire header will be fed from the service water pumps through a bypass around the service water booster pumps. Normally, pressure from the service water booster pumps holds check valve OSW-0008 in the bypass line closed.

January 25, 1990  
OSR/007/90

ATTACHMENT A

OB Fire Pump Status and Action Plan

As of January 25, 1990 OB Fire Pump repairs were delayed due to procurement difficulties regarding piston ring sets for three piston/liner replacements. These piston ring sets were shipped late on 1/25/90 and will be on site 1/29/90. The remaining plans to return OB Fire Pump to service are as follows:

1. Receive new ring sets into stores and issue to Mechanical Maintenance Dept. 1/29/90
2. Complete remaining engine assembly. 1/30/90 - 1/31/90
3. perform low speed run-in, simulated overspeed test (with 2:1 reducer) and other minor engine adjustments as required by Cummins Factory Representative. 2/1/90 - 2/2/90
4. Reconnect engine controls, return to service and turn over to Operating Dept. for performance of PT-201. 2/2/90
5. Declare OB Diesel Fire Pump operable. 2/3/90

Notification will be made to the Senior Resident Inspector if any further delays will be incurred.

Submitted by: Charles E. Prymula  
Tech Staff Aux Systems Group Leader



Based on the above considerations, On-Site Review has determined that the backup systems are adequate to provide for loss of OB diesel fire pump in conjunction with OA motor driven fire pump and no special procedures or additional equipment are required.

Prepared by: Charles E Prymula Disciplines required: A, B, G  
C. E. Prymula

Station Review:

James J. Madden Robert M. Casarano NA  
Tech Staff Supervisor Operating Engineer Asst. Superintendent  
A, B, G 1/27/90

I concur and approve: T. P. Joyce

T. P. Joyce  
Station Manager  
Zion Station

TPJ/CEP/rmd

cc: R. N. Cascarano  
W. Stone/PNSRC  
A. J. Ockert  
W. R. Kurth/Operating Engineers  
C. E. Prymula  
T. J. Maiman  
R. J. Squires  
T. E. Watts  
G. E. Trzyna  
G. J. Pliml  
Reg. Assurance File