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 WETHY, C.M. Florida Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 O'REILLY, J.P. Region 2, Atlanta, Office of the Director

SUBJECT: Confirms telcon re RO 335-79-21. Emergency diesel generator turbocharger thrust bearing is susceptible to damage under certain repeat starting modes which could result in turbocharger failure.

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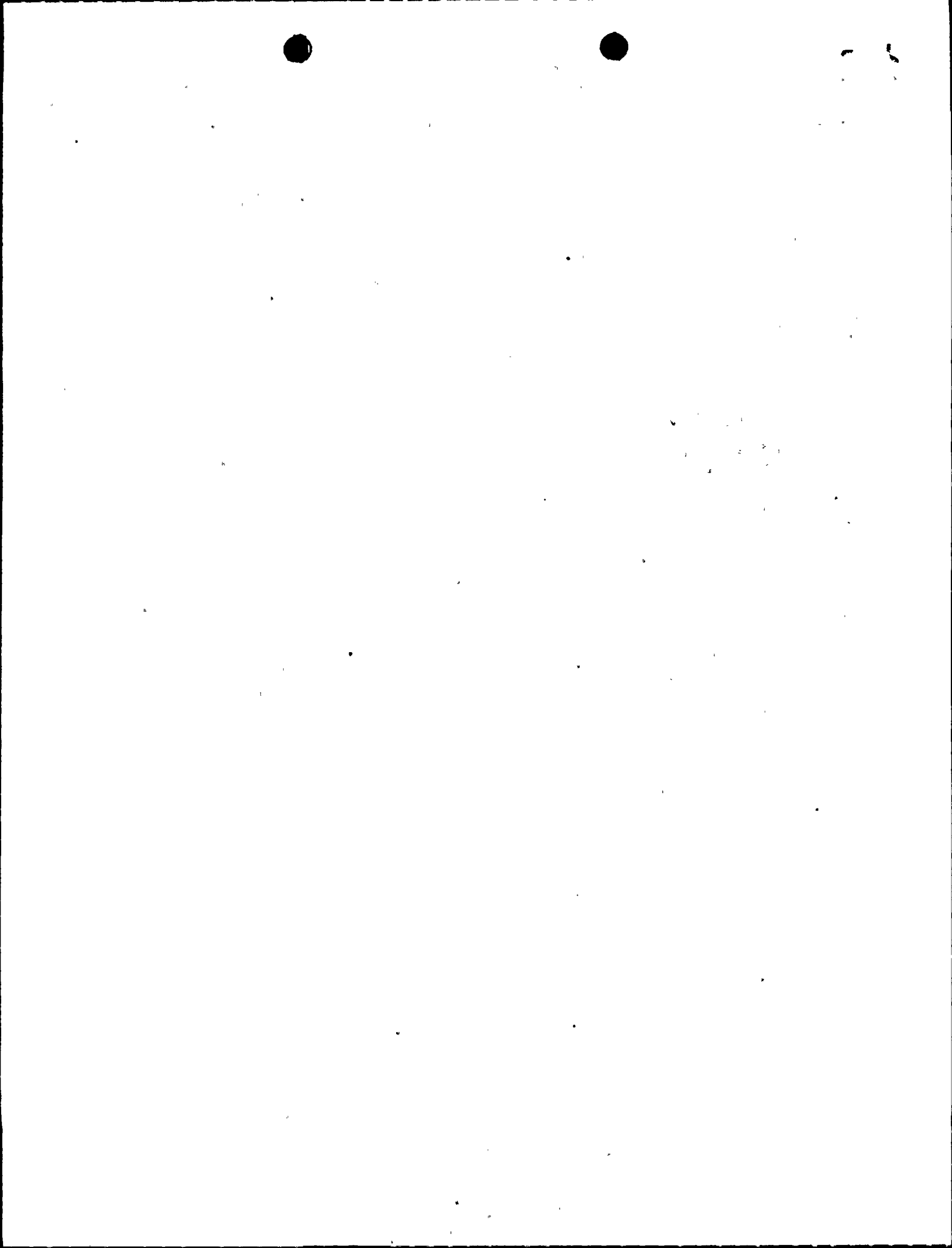
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Date: June 28, 1979

To: Mr. J. P. O'Reilly, Director, Region II  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Atlanta, GA 30303

From: Mr. C. M. Wethy, Plant Manager  
St. Lucie Plant - DPR 67  
Florida Power & Light Company  
Ft. Pierce, FL 33450

Subject: MEMO FOR FACSIMILE TRANSMISSION TO CONFIRM PROMPT REPORTABLE OCCURRENCE 335-79-21

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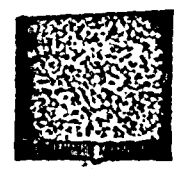
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USNRC  
ATTN: AITA

This memo confirms our verbal notification of the subject 14 day reportable occurrence to Mr. J. Dyer of your office yesterday.

Occurrence: On June 25, 1979, a report was received from Electro Motive Division, General Motors through Stewart and Stevenson Services and our Engineering Department stating that the emergency diesel generator turbocharger thrust bearing was susceptible to damage under certain repeat starting modes which could ultimately result in turbocharger failure.

This condition is encountered only when restarting the engines between 15 minutes and 3 hours after a hot shutdown while the lube oil temperature is above 160° F. Due to the lower viscosity of the oil above 160° F, the circulating oil pumps cannot produce the 30 PSI required to maintain flow to the oil filter and cooler system and the system drains to the engine sump. The oil normally in this system provides a "prime" for the main oil pump and without this "prime" the main pumps cannot establish full oil pressure to the turbocharger thrust bearing before operating speed is reached and ensuing damage could occur. If the engines are started within 15 minutes, the oil has not had time to drain and the situation does not exist. The damage occurs as cumulative wear on the bearings not as an immediate failure therefore an "emergency" start from a hot shutdown would not be prevented.



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Mr. J. P. O'Reilly, Director, Region 11  
Page Two  
June 28, 1979

Corrective Action: Electro Motive has recommended the following corrective actions which will be incorporated into the plant maintenance, test and operations procedures.

1. After hot shutdown, either restart within 15 minutes or allow the engine 3 hours to cool after it has been operated before restarting. This is not applicable to emergency starts.
2. Ensure circulating oil pump operation for a minimum of 30 minutes after changing oil filters or draining the accessory oil system. Idle start the engine if possible to ensure accessories are completely filled before rapid starting.
3. Identify and correct all leaks at the top of the oil coolers to avoid rapid draining of the cooler.

In addition to the above, Electro Motive is currently working on the development of modification package to improve the system which is to be available in about 6 months.

It should be noted that although we are reporting this as a prompt reportable occurrence, it is our position that this is a development of investigations resulting from a previous reportable occurrence, 335-77-42 and this should be supplemental information to the previous report.

  
C. M. Wethy  
Plant Manager  
St. Lucie Plant

CMW:jfj