

REPORT DATE 1/13/82

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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REPORT SOURCE

L	6	0	5	0	0	0	3	6	6	7	1	2	1	6	8	1	8	0	1	2	7	8	3	9
60	61									68	69					74	75							80
DOCKET NUMBER											EVENT DATE							REPORT DATE						

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 With the mode switch in the run position, normal surveillance was being
03 performed on the 2C Diesel Generator per the "DIESEL MANUAL START TEST"
04 procedure. During the test, the engine failed and was declared inoper-
05 able. The redundant power supplies were proven operable per Tech. Specs.
06 3/4.8.1.2. The health and safety of the public were not affected by this
07 repetitive event as last reported on LER 50-366/1981-094.

[illegible]

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 An investigation revealed that one of the two rod cap retaining bolts
1 1 had come out allowing the engine torque to break the second retainer
1 2 bolt which allowed the rod to separate from the crankshaft. This result-
1 3 ed in engine failure. The engine was repaired and returned to service
1 4 on December 29, 1981.

FACILITY STATUS (1) 5 (E) (28) % POWER (0) 9 9 (29) OTHER STATUS (30) NA METHOD OF DISCOVERY (B) (31) DISCOVERY DESCRIPTION (32) Operator Observation
 ACTIVITY CONTENT RELEASED OF RELEASE (1) 6 (Z) (33) (34) AMOUNT OF ACTIVITY (35) NA LOCATION OF RELEASE (36)
 PERSONNEL EXPOSURES NUMBER (1) 7 (0) 0 0 (37) TYPE (Z) (38) DESCRIPTION (39) NA
 PERSONNEL INJURIES NUMBER (1) 8 (0) 0 0 (40) DESCRIPTION (41) NA
 LOSS OF OR DAMAGE TO FACILITY TYPE (1) 9 (Z) (42) DESCRIPTION (43) NA
 PUBLICITY ISSUED (2) 0 (N) (44) DESCRIPTION (45) NA
 8302030484 830127
 PDR ADOCK 05000366
 S PDR
 NRC USE ONLY

NAME OF PREPARER S. B. Tipps

PHONE (912) 367-7851

LER No.: 50-366/1981-127, Revision 1
Facility: Edwin I. Hatch
Licensee: Georgia Power Company
Docket #: 50-366

Narrative Report
for LER 50-366/1981-127, Revision 1

On December 15, 1981, with the mode switch in the run position, normal surveillance was being performed on the 2C Diesel Generator. During the test, the engine failed and was declared inoperable. The redundant power supplies were proven operable per Tech. Specs. 3/4.8.1.2. Diesel start failure is a repetitive event as last reported on Reportable Occurrence Report No. 50-366/1981-094. The exact mode of failure is repetitive to the failure dated November 26, 1980, and reported on Reportable Occurrence Report No. 50-366/1980-159.

An investigation revealed that one of the two rod cap retaining bolts for the No. 11 cylinder had come out allowing the engine torque to break the second retainer bolt which allowed the rod to separate from the crankshaft. On December 29, 1981, all engine repairs and vendor "Break In Run" requirements were completed satisfactorily. The "18 MONTH DIESEL GENERATOR SURVEILLANCE TEST" and the "DIESEL GENERATOR MANUAL START" procedures were performed satisfactorily, thus returning 2C Diesel to normal operable status.

This failure of the retaining device on the 2C Diesel connecting rod cap is generic to the 1980 failure on the 2C Diesel. However, this is not a common mode of failure for this type engine throughout the industry. Since the first failure on this engine in 1980, all remaining diesels at Plant Hatch were inspected for missing cotter pins and/or loose nuts on the crankshaft assemblies. To date none have been found. This diesel was inspected as recent as September, 1981. Additionally, the remaining diesels were inspected again after this failure. No problems were found. Normal preventative maintenance also provides these inspections.

On July 27, 1982, another failure of Diesel 2C initiated an investigation by the vendor engineers. This investigation concluded the cause of failure was inadequate lubrication. At that time, the vendor recommended increasing the pre-lube time, thus allowing the engine components to become better lubricated before the diesel is manually started. Operating procedures were revised to incorporate the new pre-lube time.

UNIT NUMBER 2/TwoREPORT NUMBER 2-81-234TITLE Failure of 2C DGMPL NUMBER 2B435001C DISCOVERY DATE 12-16-81 TIME 0757EVENT DATE 12-16-81 TIME 0757 REPORT DATE 12-16-81 TIME 0833REACTOR POWER 2359 MWt. GENERATOR OUTPUT 222 MWe (gross)MODE SWITCH POSITION: RUN (☒) STARTUP & HOT STANDBY ()
SHUTDOWN (), REFUEL ()CAUSE OF DEVIATION: PERSONNEL ERROR (), EXTERNAL CAUSE (),
DESIGN, MANUFACTURING, CONSTRUCTION/INSTALLATION (),
DEFECTIVE PROCEDURES (), COMPONENT FAILURE (☒)
() OTHER _____TECHNICAL SPECIFICATION REQUIREMENTS PERFORMED: N/A (), YES (☒)EXPLAIN Refund quick start/HWP-23801 as 2A9442B DG
and Breaker alignment (off site work)/HWP-1-3195DEVIATION REPORTED BY Don D. Smith SIGNATURE L. S. Woods
Shift ForemanDATE 12-16-81REVIEWED BY Al Lewis AND C. G.
Operations Supt. or Supv. Mgr. or Asst. Mgr. or SPES

The Superintendent of Operations and the Superintendent of Plant Engineering and Services have reviewed this deviation and determined that it is either reportable under a 24 hour/14 day, 30 day, special, Safety Limit Violation, or 10CFR 21 report, or that it is not reportable.

FURTHER REPORTING REQUIRED: YES (☒) NO ()

IF YES, GIVE APPLICABLE REPORT REQUIRED AND REPORT NO.

RO 2-81-127

IF NO, EXPLAIN _____

30 Day Report Due 12/31/81 (1-15-82)Required By 6.9.1.9.6Responsible RTN

INP-425 FOT

DEVIATION DESCRIPTION:

- a. Activity in progress when event occurred: *Shift was performing ins. su's on 2C D/G per 3801 D/G m'n start. Maint was in attendance at the D/G for the routine run operator in control room was starting the Diesel.*
- b. Describe circumstances leading to the event: *operator started the Diesel from the control room. unit started & tripped because of Diesel reported the engine developed a knock & tripped also has a rod sticking thru the upper crank shaft area*
- c. Describe the EVENT (Must include reason for report - i.e., give the Technical Specification or license requirement which was not met): *Leak Spec Section 3.8.1.1 requires all 3 D/G's to be operable in cond 1,2,3. this Diesel has failed & will require extensive maint.*
- d. Describe any significant occurrence that took place as a result of the event: *Unit is in a 72 hour LCo. Due to 2C Diesel being inop.*
- e. Describe chain of events which occurred: *see a & b above.*

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file/comm



Georgia Power

Edwin I. Hatch Nuclear Plant

January 13, 1982
PM-82-33

PLANT E. I. HATCH
Licensee Event Report
Docket No. 50-366

United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region II
Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

ATTENTION: Mr. James P. O'Reilly

Pursuant to Section 6.9.1.9.b of Hatch Unit II Technical Specifications,
please find attached Reportable Occurrence Report No. 50-366/1981-127.

Tom Greene
for M. Manry
Plant Manager

MM/RTN/mla

xc: J. H. Miller, Jr.
R. J. Kelly
G. F. Head
J. T. Beckham, Jr.
C. L. Coggin
R. D. Baker
Control Room
File

Dupe ~~8201260150~~

LER No.: 50-366/1981-127
Licensee: Georgia Power Company
Facility: Edwin I. Hatch
Docket No.: 50-366

Narrative Report
for LER 50-366/1981-127.

On December 16, 1981, with the mode switch in the run position, normal surveillance was being performed on the 2C Diesel Generator. During the test, the engine failed and was declared inoperable. The redundant power supplies were proven operable per Tech Specs 3/4.8.1.2. Diesel start failure is a repetitive event as last reported on Reportable Occurrence Report No. 50-366/1981-094. The exact mode of failure is repetitive to the failure dated November 26, 1980, and reported on Reportable Occurrence Report No. 50-366/1980-159.

An investigation revealed that one of the two rod cap retaining bolts for the No. 11 cylinder had come out allowing the engine torque to break the second retainer bolt which allowed the rod to separate from the crankshaft. No cause has been found by either the factory or ourselves as to why the nut backed off. The nut has sufficient torque to prevent it backing off without the use of a cotter pin.

This failure of the retaining device on the 2C Diesel connecting rod cap is generic to the 1980 failure on the 2C Diesel. However, this is not a common mode of failure for this type engine throughout the industry. Since the first failure on this engine in 1980, all remaining diesels at Plant Hatch were inspected for missing cotter pins and/or loose nuts on the crankshaft assemblies. To date none have been found. This diesel was inspected as recent as September, 1981. Additionally, the remaining diesels were inspected again after this failure. No problems were found. Normal Preventative Maintenance also provides these inspections. An investigation is continuing and a follow-up report will be issued.