NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: [| | | | |] (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1	LICENSEE CODE: M S G G S 1 (2)	LICENSE NUMBER: 0 0 - 0 0 0 0 0 - 0 0 (3)	LICENSE TYPE: 4 1 1 1 1 (4)	CAT: (5)		
CON'T 0 1	REPORT SOURCE: L (6)	DOCKET NUMBER: 0 5 0 0 0 4 1 6 (7)	EVENT DATE: 1 0 0 4 8 2 (8)	REPORT DATE: 1 0 1 8 8 2 (9)		

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 With the unit in cold shutdown, a special inspection on the Division 2 Standby Diesel
0 3 Generator was conducted. During this inspection, one of the capscrews which secures
0 4 the rear crankcase cover to the engine block was discovered to be defective. This
0 5 report is being submitted pursuant to T.S.6.9.1.12.e. and i. This event resulted in
0 6 no significant event, damage to equipment or effect upon public health or safety. The
0 7 Division 1 and 3 Diesel Generators were operable at the time the defect was discovered.
0 8

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	E E (11)	B (12)	B (13)	E N G I N E (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	-	0 8 0	/	0 1	T	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
A (18)	X (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	A (25)	D 0 5 5 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The capscrew broke while being checked for the correct torque. It is believed that the
1 1 capscrew (SAE Grade 5, 5/8" NC X 1-3/4") had partially cracked due to fatigue during
1 2 engine operation prior to the torque check. This capscrew and 20 other capscrews were
1 3 replaced. Nuclear Plant Engineering is evaluating the capscrew failure. Div. 1
1 4 Diesel Generator capscrews were inspected and determined to be satisfactory.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	G (28)	0 0 0 (29)	NA	C (31)	Special Inspection by Maint Work Order

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	NA

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)		

8210220150 821018
PDR ADOCK 05000416
S PDR

NAME OF PREPARER Original signed by W. H. Chenault PHONE:

GPO 917-926

SUPPLEMENTARY INFORMATION TO
LER 82-080/01 T-0

Licensee: Mississippi Power & Light Co.
Facility: Grand Gulf Nuclear Station - Unit 1
Docket No: 50-416

A special inspection of the 21 capscrews which secure the rear crankcase cover to the engine block on the Division 2 Standby Diesel Generator revealed that one capscrew had failed. The capscrews are SAE Grade 5, 5/8" NC x 1-3/4".

The maintenance work order which led to the discovery of the failed capscrew had been initiated as a follow-up to a previous, similarly failed capscrew on the same Division 2 Standby Diesel Generator rear crankcase cover. This situation was previously reported to the NRC as a Potentially Reportable Deficiency (PRD) 82/14 under 10 CFR 50.55e. The first failure occurred on March 15, 1982 during the 24-hour load test performed as part of the Pre-Operational Test Program. The failure on March 15, 1982 resulted in a generator fault caused by the head of the broken capscrew becoming lodged between the generator stator and rotor while the generator was at 100% load. This resulted in the generator tripping on Generator Differential Current. The generator was subsequently replaced. The capscrews securing the rear crankcase cover were inspected for correct tightness and found to be below the required 60 ft-lbs. The capscrews were replaced on both the Division 1 and 2 Diesel Generators and torqued to the required 60 ft-lbs.

The follow-up work order, performed on October 4, 1982, instructed that each of the capscrews securing the rear crankcase cover to the engine block be checked for correct tightness (60 ft-lbs). Three of the capscrews were found to be less than 40 ft-lbs (20,23 and 35 ft-lbs). The work order further instructed that any capscrews not within ±2 ft-lbs of the required 60 ft-lbs be torqued within the acceptable range. When the capscrew (which was at 20 ft-lbs originally) was tightened, it sheared off approximately one inch from the bottom side of the head before reaching 60 ft-lbs. The remaining capscrews were tightened successfully. An additional work order was issued to replace the 21 capscrews on the Division 2 Diesel Generator rear cover and torqued to 60 ft-lbs. An inspection of the Division 1 Diesel Generator revealed no problems. (The Division 3 Diesel Generator is supplied by a different manufacturer so no inspection was required).

Currently Nuclear Plant Engineering is evaluating the failed capscrew and their findings will be reported in a followup LER.