



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

JAN 12 1984

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MEMORANDUM FOR: Files

THRU: John A. Olshinski, Director
Division of Engineering and Operational Programs *John 1/12/84*

FROM: Thomas E. Conlon, Chief
Plant Systems Section
Engineering Program Branch
Division of Engineering and Operational Programs

SUBJECT: NRR MEETING ON TRANSAMERICA DELAVAL, INC. (TDI) DIESEL ENGINE PROBLEMS ON JANUARY 5, 1984

The purpose of this meeting was to update the various Division Directors in NRR on the numerous problems encountered with TDI diesel engines.

Mr. R. Caruso, LB#2, conducted the updating which included a background on the more significant failures such as; turbo chargers, crankshaft, piston head cracks, piston skirt cracks, connecting rod bearings, fuel lines, cylinder head cracks and push rod cracks. His discussion also included a brief summation on the lack of appropriate QA/QC at TDI. Mr. Caruso's summation was highlighted by Ian Barnes, RIV, based on vendor inspection findings. The latest vendor inspection reports have not been issued pending investigation of apparent Part 21 violations at IUI.

After the updating, Mr. D. Eisenhut conducted a general discussion on the subject matter. As a result of this discussion, Mr. Eisenhut concluded that the licensing of Grand Gulf, Unit 1, for full power operation was the more important problem for NRR with respect to the TDI diesel problem than of any other site. The course of licensee action that will be satisfactory to NRR has not been defined in any detail as yet. However, it was pointed out by several staff members that substantial assurance will have to be provided by each licensee that the quality of design and manufacturing of TDI diesels is adequate to assure reliable performance in nuclear service.

Thomas E. Conlon
Thomas E. Conlon

8502120436 840B16
PDR FOIA PDR
BELL84-151

Carroll
DIESELS
DIV I & II

TELEPHONE AND EVENT RECORD FORM

Facility GRAND GULF UNIT 1 Docket No(s) 50-416

Date and Time of Call 0920 2/16/84

Date and Time of Occurrence FIRST FOUND ON NOV 10, 1983 DURING DIESEL MAINTENANCE

Type of Report (LER, 50.55e, Part 21, etc.) POTENTIALLY REPORTABLE DEFICIENCY WELDS

Subject CRACKED CONNECTOR PUSH ROD BALL FOUND IN DIV I & II DIESELS

Description of Occurrence ON NOV 10, 1983, DURING DIESEL MAINTENANCE, IT WAS

DISCOVERED THAT THE CONNECTOR PUSH ROD BALL WELDS WERE CRACKED. IT WAS ALSO OBSERVED THAT THE BALLS THEMSELVES SHOWED EXTENSIVE DISCOLORATION AS A RESULT OF HEAT FROM WELDING THE BALLS TO THE CONNECTOR. MIDDLE SOUTH SERVICES PERFORMED A METALLURGICAL ANALYSIS OF THE WELDS, AND CONCLUDED THAT THE CRACKS WERE PRODUCED DURING WELDING, THUS A MANUFACTURER'S SUPPLIER DEFICIENCY. THE SUPPLIER, (TRANSAMERICA DELAVAL), PROVIDED MP&L WITH IMPROVED DESIGNED REPLACEMENTS. ALL CONNECTOR BALL WELDS WERE REPAIRED IN BOTH DIV I & II DIESELS.

Is there a severity level II or III occurrence per MC 1300? Yes No

Is this a Potential Abnormal Occurrence or Significant Occurrence per MC 1110? Yes No

Licensee ID# _____ Region Action: None Info Only

Followup per MC _____ Region IV notified Assigned Other

Daily Report submitted No Yes _____ (Date)

PN issued No Yes _____ (Date)

Preparer of telephone report form ROBERT E CARROLL JR

Licensee Contact DWAYNE CHISOLM

- Distribution:
- J. Rausch (original)
 - Originator (copy)
 - PRP Project Inspector

MORNING REPORT - REGION II

DATE: February 16, 1984

LICENSEE/FACILITY	NOTIFICATION/SUBJECT	DESCRIPTION OF ITEM OR EVENT
MP&L/Grand Gulf 1 DN: 50-416	Licensee, 2/16	<p>Part 21, Potentially Reportable Deficiency - Cracked Connector Push Rod Ball Welds Found in Divisions I and II Diesels:</p> <p>On November 10, 1983, during diesel maintenance, it was discovered that the connector push rod ball welds were cracked. It was also observed that the balls themselves showed extensive discoloration as a result of heat from welding the balls to the connectors. Middle South Services performed a metallurgical analysis of the welds, and concluded that the cracks were produced during welding, thus a manufacturer's/supplier deficiency. The supplier, (TransAmerica Delaval), provided MP&L with improved designed replacements. <u>ASSEMBLIES (BALL CONNECTOR ARE ONE UNIT)</u> All connectors and main push rods were replaced in both Divisions I and II diesels. Routine follow-up. Region IV informed.</p>

DISTRIBUTION:

Regional Administrator (original)

J. A. Olshinski

DPRP File (2)

Originator R. E. Carroll

APPROVED BY:

Originator RECSection Chief CJBranch Chief Dofor R. C. Lewis Don

ENCLOSURE 1

TELEPHONE AND EVENT RECORD FORM

Facility GRAND GULF Docket No(s) 50-416

Date and Time of Call 4/2/84 - 1240 HRS 50-417

Date and Time of Occurrence SEE BELOW

Type of Report (LER, 50.55e, Part 21, etc.) PRD 84-06

Subject IMPROPER HEAT TREATING ON DELAVAL PISTON SKIRTS

Description of Occurrence IN DEC 1983, GRAND GULF RECEIVED A DIESEL OWNERS NOTICE FROM TRANSAMERICA DELAVAL, INC (TDI) WHICH IDENTIFIED SERIAL NUMBERS OF PISTON SKIRTS THAT WERE IMPROPERLY HEAT TREATED. A COMPARISON OF THE ~~TDI~~ SERIAL NUMBERS TO THE PISTON SKIRTS WHICH WERE ON SITE, REVEALED ONE SPARE SKIRT IN THEIR WAREHOUSE AS BEING ON THE LIST. THOSE PISTON SKIRTS THAT WERE ORIGINALLY INSTALLED IN DIVISION I & II DIESELS AND THEIR SUBSEQUENT REPLACEMENTS, WERE NOT IDENTIFIED IN THE ~~TDI~~ NOTICE OF DEC 1983, NOR IN A PREVIOUS TDI NOTICE OF OCT 1982 CONCERNING INSTALLED DIESEL PISTON SKIRTS. - INFO ONLY

Is there a severity level II or III occurrence per MC 1300? Yes No

Is this a Potential Abnormal Occurrence or Significant Occurrence per MC 1110? Yes No

Licensee ID# _____ Region Action: None Info Only

Followup per MC _____ Region IV notified _____ Assigned _____ Other _____

Daily Report submitted No Yes _____
(Date)

PN issued No Yes _____
(Date)

Preparer of telephone report form R.E. CARROLL JR

Licensee Contact KAY SHELDON 601-969-2526

Distribution:
J. Rausch (original)
Originator (copy)
PRP Project Inspector

MORNING REPORT - REGION II

DATE: 4/3/84

LICENSEE/FACILITY

GRAND GULF

DNS: 50-416

50-417

NOTIFICATION/SUBJECT

4/2/84 - 1240 Hours

Licensee Telecon

DESCRIPTION OF ITEM OR EVENT

Potential Part 21 Report
IMPROPER HEAT TREATING ON DELAVAL PISTON SKIRT(S):

In Dec. 1983, Grand Gulf received a Diesel Owners Notice from Transamerica Delaval, Inc (TDI) which identified serial numbers of piston skirts that were improperly heat treated. A comparison of the serial numbers to the piston skirts which were on site, revealed one spare skirt in their warehouse as being on the list. Those piston skirts that were originally installed in Division I & II diesels and their subsequent replacements, were not identified in the TDI notice of Dec. 1983, nor in a previous TDI notice of Oct. 1982 concerning installed diesel piston skirts. - Info only, Vendor Branch informed.

DISTRIBUTION:

Regional Administrator (original)

A. Olshinski

PRP File (2)

Originator R. E. Carroll

APPROVED BY:

Originator *RCG*Section Chief *CJ*Branch Chief *Dani*R. C. Lewis *HCD*



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

84 MAR 8 2, 1984
P 1: 03

NUCLEAR PRODUCTION DEPARTMENT

U.S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 2900
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Regional Administrator

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-13
File: 0260/L-835.0
Special Report 84-007/0 Diesel
Generator Turbocharger Bolt
Failure
AECM-84/0135

On two occasions, January 31 and February 10, 1984, bolts securing the Division 1 Standby Diesel Generator left bank turbocharger failed during the performance of 100 hour test runs. In each case the diesel generator was shutdown as a precautionary measure. There was no noticeable effect on engine performance or operation.

A previous similar occurrence on July 26, 1983 was reported in LER 83-107. As corrective action the left bank turbocharger was replaced, longer mounting bolts were installed, and equipment associated with the turbochargers was realigned.

On January 31, 1984 at 0905 hours a maintenance inspection with the engine operating revealed two bolts missing from the turbocharger. The results of a subsequent examination were that the capscrews failed due to fatigue crack propagation induced from turbocharger mount misalignment. The right bank turbocharger mounting bolts were inspected and found secure. The turbocharger was realigned and the 100 hour test run attempted again.

On February 10, 1984 at 1030 hours during the next test run, it was noted that three of the four left bank turbocharger bolts had failed. The engine was again secured. The cause of the failure was determined to be a slight misalignment between the turbocharger exhaust and the turbocharger co intercooler adapter. The misalignment has been corrected.

The diesel generator was loaded successfully to 7000kW for 21 hours before the shutdown on January 31 and 72 hours before the shutdown on February 10. Therefore, the tests are considered valid and successful in accordance with Position C.2.e.(3) of Regulatory Guide 1.108. The number of valid failures in the last 100 tests remains at one (see Special Report No. 84-005/0) and the required testing frequency is once per 30 days.

Member Middle South Utilities System

840312015T

MISSISSIPPI POWER & LIGHT COMPANY

The event of February 10 was originally reported to Mr. H. Bailey of your staff as a four hour reportable occurrence. The failure has since been determined to be isolated to the left bank turbocharger on the Division 1 Diesel Generator. LER 83-107 will be updated to include these failures. Any further information on this subject will be provided in an update to LER 83-107. This report is submitted in accordance with Regulatory Guide 1.108.

Yours truly,



L. F. Dale
Manager of Nuclear Services

EBS/SHH:rg

cc: Mr. J. B. Richard
Mr. R. B. McGehee
Mr. T. B. Conner
Mr. G. B. Taylor

Mr. Richard C. DeYoung, Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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



Nuclear Information and Resource Service

1346 Connecticut Avenue NW, 4th Floor, Washington, D.C. 20036 (202) 296-7552

June 1, 1984

James M. Felton, Director
Division of Rules and Records
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

FREEDOM OF INFORMATION
ACT REQUEST

FOIA-84-459

Rec'd 6-5-84

FREEDOM OF INFORMATION ACT REQUEST

Dear Mr. Felton:

Pursuant to the Freedom of Information Act, 5 U.S.C. 522, as amended, the Nuclear Information and Resource Service requests the following documents regarding the Grand Gulf nuclear plant. Please consider "documents" to include reports, studies, test results, correspondence, memoranda, meeting notes, meeting minutes, working papers, graphs, charts, diagrams, notes and summaries of conversations and interviews, computer records, and any other forms of written communication, including internal NRC Staff memoranda. The documents are specifically requested from, but not limited to, the Office of Inspection and Enforcement (I&E); Office of the Executive Legal Director (OELD); Office of Analysis and Evaluation of Operational Data (AEOD); Office of Nuclear Regulatory Research (Research); Office of Nuclear Reactor Regulation (NRR); Generic Issues Branch of the Division of Safety Technology, NRR; Office of the General Counsel (OGC); and the Operating Reactors Branches of the Division of Licensing. In your response, please identify which documents correspond to which requests below.

Pursuant to this request, please provide all documents prepared or utilized by, in the possession of, or routed through the NRC related to:

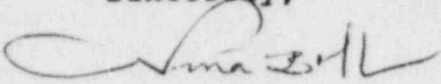
1. Operation of the Grand Gulf nuclear power reactor produced since January 1, 1984, including operation with the Transamerica Delaval Inc. diesel generators; and
2. The Transamerica Delaval Inc. diesel generators in use at the Grand Gulf nuclear power plant.

In our opinion, it is appropriate in this case for you to waive copying and search charges, pursuant to 5 U.S.C. 552(a)(4)(A) "because furnishing the information can be considered as primarily benefiting the general public." The

9501180237

Nuclear Information and Resource Service is a non-profit organization serving local organizations concerned about nuclear power and providing information to the general public.

Sincerely,

A handwritten signature in cursive script, appearing to read "Nina Bell".

Nina Bell
Nuclear Safety Analyst

cc: File