



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

October 31, 1984

NUCLEAR LICENSING & SAFETY DEPARTMENT

U.S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 2900
Atlanta, Georgia 30323

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

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Unit 2
Docket No. 50-417
License No. NPF-13
File: 0260/L-835.0
Ref: AECM-84/0357, July 6, 1984
Final Response for PRD-84/09, DuBose
Steel, Inc., Potentially Defective
Pieces
AECM-84/2-0019

On June 1, 1984, Mississippi Power & Light Company notified Mr. R. Carroll, of your office, of a Potentially Reportable Deficiency (PRD) at the Grand Gulf Nuclear Station (GCNS) Unit 2 construction site. The deficiency concerns potentially defective pieces of steel received for use from DuBose Steel, Inc.

As previously reported, MP&L has evaluated this deficiency and determined that it is not reportable for Unit 1. Subsequently, MP&L has determined that this deficiency is not reportable for Unit 2. Details are provided in our attached Final Report.

Yours truly,

L. F. Dale
Director

EBS/SHH:vog
Attachment

cc (See Next Page)

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MISSISSIPPI POWER & LIGHT CO... NY

cc: Mr. J. B. Richard (w/a)
Mr. R. B. McGehee (w/o)
Mr. N. S. Reynolds (w/o)
Mr. G. B. Taylor (w/o)

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

FINAL REPORT FOR PRD-84/09

I. Description of Deficiency

A. Definition of the Problem as it is Known to Date:

DuBose Steel, Inc. notified Bechtel by letter dated 5/16/84 that six (6) pieces of W6X20 - 20 feet long steel beams, heat number 77052, supplied to GCNS were potentially defective. The exact nature of the potential defects were investigated by DuBose Steel, Inc. and their subsupplier, Northwestern Steel & Wire Co. through an independent testing laboratory, Hanson Engineers, Inc. DuBose Steel, Inc. shipped samples from heat number 77052 to Northwestern Steel & Wire Co. for testing the week of 6/18/84. The material was thought to have contained twisted or skewed webs, shallow fillets, and net cross-sectional area less than required.

B. Names of Plant Systems Affected:

E12, G33, E21, E22, E51, and B21

C. Applicability to Units 1 and/or 2:

Applicable to Unit 2 and Unit 1 (This report will address Unit 2 only).

D. Part 21 Applicability:

10 CFR Part 21, is not Applicable to Unit 2, since these items have not been turned over to MP&L.

E. Part 21 Report:

Reference DuBose Steel, Inc. Letters dated May 15, 1984 and May 16, 1984 addressed to NRC Region 2 and Grand Gulf Nuclear Station respectively.

F. Cause of the Deficiency:

Some material samples appeared to contain shallow fillets at the junction of the flange and web. These shallow fillets were evaluated by Hanson Engineers, Inc. to have occurred in the rolling process and were found to be within the mill fabrication tolerances of ASTM A6. Chemical analyses and tensile tests of the suspect material were conducted and found to meet the requirement of ASTM A36 - Standard Specification of Structural Steel. Physical measurements showed the sample meeting all physical dimensional requirements.

G. Applicability to NSSF Vendor:

The deficiency is not applicable to the NSSF Vendor.

FINAL REPORT FOR PRD 84-09

II. Analysis of Safety Implications

A. Identification of Interfacing Systems and Interactions:

See Item I.B. above.

B. Recommendation of Reportability:

The condition cited in I.A. has been determined to have no impact on safety. (See I.D., I.F., and III.B.).

III. Corrective Actions Taken

A. Cause and Extent of the Deficiency:

DuBose Steel notified the NRC by letter dated May 15, 1984 that potentially defective steel was then presently known to exist in three heats: 80551, 89728 and 77052. Only steel from heat number 77052 was supplied to GGNS and was of a nature described in Item I.A. above.

B. Description of Actions Taken to Correct Identified Deficiencies:

Samples of the potentially defective steel were sent to Northwestern Steel & Wire Co. (NSWCo.) by DuBose Steel, Inc. NSWCo. engaged the services of Hanson Engineers, Inc. to examine the samples. The material was found to meet the required chemical and physical requirements of ASTM A36 and ASTM A6, respectively, as well as the AISC Code of Standard Practice for mill fabrication.

A complete survey of the location of steel at Grand Gulf Units 1 and 2 from the potentially defective heat was performed and documented in Bechtel NCR 6786. The material was used to fabricate pipe supports for several safety related piping systems. The design calculations for each pipe support were reviewed to determine the stress levels within the potentially defective steel members in each pipe support. Using 18.6 KSI allowable bending stress and 12.4 KSI allowable shear stress for A36 material (36.0 KSI yield strength), the highest calculated stress interaction was found to be $0.93 \leq 1.0$. Generally interaction was in the range of $0.5 \leq 1.0$.

A visual inspection of the highly stressed supports containing the potentially defective steel was performed to verify that no significant visual defects were present in the material used in Grand Gulf Unit 2.

Based on the review of calculations and visual inspections performed, the material identified by NCR 6786 was dispositioned "use-as-is".

FINAL REPORT FOR PRD-84/09

C. Action Taken to Prevent Future Occurrence:

Standard mill fabrication practices for inspecting for deficiencies will continue to be followed.