

# Bechtel Power Corporation

Engineers - Constructors

12400 East Imperial Highway

Norwalk, California 90650

MAIL ADDRESS

P.O. BOX 50660 - TERMINAL ANNEX, LOS ANGELES, CALIFORNIA 90060

TELEPHONE (213) 864-8011



January 31, 1980

Mr. Karl Seyfrit  
Director, Region IV  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76012

Subject: Georgia Power Company  
Alvin W. Vogtle Nuclear Plant  
Bechtel Job 9510-001  
Potential Substantial Safety  
Hazard/Significant Deficiency Report  
File X7BG03 Log BO 0003

Dear Mr. Seyfrit:

This is an interim report covering requirements under 10 CFR 21 and 10 CFR 50.55(e) regarding the potential deficiency reported to you by telephone at approximately 8:50 A.M. Pacific Standard Time on January 29, 1980 by Bechtel personnel, Burton L. Lex, Project Manager Vogtle. This same condition was reported on January 28, 1980 to Inspection and Enforcement, Region II (Atlanta) by telephone by Georgia Power Company as a significant reportable deficiency per 10 CFR 50.55(e) as reported to you on January 29, 1980. Bechtel has concluded that this condition may be reportable under 10 CFR 21.

This report is intended to describe the condition, our investigation and conclusions reached to-date, and our corrective action program to complete the evaluation and to resolve any defects in design. Descriptive material required under both parts 10 CFR 21 and 10 CFR 50.55(e) are included.

The following is the specific information required:

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1. INDIVIDUAL REPORTING

Burton L. Lex, Project Manager - Vogtle, Los Angeles Power Division,  
Bechtel Power Corporation, 12400 E. Imperial Highway, Norwalk, CA  
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2. FACILITY AND COMPONENT IDENTIFICATION

Vogtle Electric Generating Plant, Units 1 and 2 (Georgia Power Company), Burke County, Georgia.

Approximately 5,760 pipe support designs covering nuclear and non-nuclear support systems are under investigation. This includes all piping supports designs issued on the Vogtle Project to date.

3. SUPPLYING FIRM

Design - Bechtel Power Corporation

Construction - Georgia Power Company

4. NATURE OF DEFECT(S)

The load capacity tables for embed plates were determined on the basis of full engagement area and no lateral loads (on the weak axis of the embed). Application of these tables in the design of supports, in some cases, has been based on partial engagement and has allowed lateral loads in some instances. It is possible that some pipe support designs released for construction have exceeded the allowable embed loads based on partial engagement and due to the presence of the lateral loads.

5. DATE OF NOTIFICATION OF DEFECT

Bechtel Power Corporation identified the condition on January 25, 1980. Bechtel's preliminary evaluation on January 28, 1980 was reported to the Georgia Power Company who in turn reported the condition under 10 CFR 50.55(e) to I&E, Region II on that date. Bechtel continued their evaluation on January 29, 1980 and reported to I&E, Region IV on that date that the condition may be reportable under 10 CFR 21.

6. OTHER COMPONENTS WITH IDENTICAL DEFECTS

A preliminary check has indicated that this condition has not been repeated on any other jobs in the Los Angeles Power Division. The corrective action program will include an in-depth review of other Bechtel projects in this and other offices.

No pipe supports have been installed on Units 1 and 2. Approximately 66 nuclear class supports have been fabricated by Bergen-Paterson and are scheduled for shipment February 4, 1980. Approximately 312 non-nuclear supports have been fabricated by

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Bergen-Paterson and shipped to the jobsite. Approximately 245 additional pipe support designs have been released to the Bergen-Paterson shop for fabrication. A total of approximately 5,760 nuclear and non-nuclear supports, including those identified above, have been released to Georgia Power Company for fabrication by either Bergen-Paterson, Pacific Scientific or Georgia Power Company field shop.

7. CORRECTIVE ACTION

The following investigation and corrective action program has been initiated:

A. By The Project

1. Suspend any installation of pipe supports (which has not been started) pending resolution of the adequacy of their design.
2. Develop embed plate load capacity tables to include the effects of partial engagement, and develop pipe support stiffening details at the embed plate interface, where required.
3. Review all of the approximately 5,760 pipe support designs which have already been designed and are in process and modify them as required, using documents and details developed under Item 2.
4. Initiate additional training to ensure effective communication among the engineering disciplines.

B. By Divisional Management

1. Evaluate the applicable design standards on which this work was based for possible errors in their content or in the instructions (to projects) for their use.
2. Alert other projects to this condition for their investigation to determine if a similar error may have occurred.

This corrective action program is expected to be completed in approximately 3 months.

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The project corrective action program is the responsibility of the Bechtel-Vogtle project under Mr. Burton L. Lex, Project Manager. The Divisional corrective action program is the responsibility of Mr. W. A. Homer, Manager of Division Engineering. The Divisional findings will be incorporated with the project findings in the final report.

8. NOTIFICATION TO OTHER LICENSEES

Notification has been made to Georgia Power Company.

9. UNDERLYING CAUSE(s)

Misinterpretation of documents by the Pipe Stress and Support design group of documents issued by Civil/Structural design group.

10. SAFETY IMPLICATIONS

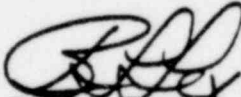
Some pipe support designs released for fabrication and installation may have exceeded the allowable embed loads based on partial engagement. Design margins may not have been sufficient to preclude deformation or failure of some pipe supports under design operational loads.

11. DELEGATION

Mr. Burton L. Lex has been delegated by Mr. I. R. Caraco, Vice-President and Division Manager of Los Angeles Power Division to submit this report.

Very truly yours,

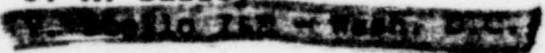
BECHTEL POWER CORPORATION



B. L. Lex  
Project Manager  
Los Angeles Power Division

BLL/amt

cc: D. E. Dutton  
C. W. Hayes  
J. A. Bailey



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