

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of)
UNION ELECTRIC COMPANY)
(Callaway Plant, Unit 1))

Docket No. STN 50-483 OL

AFFIDAVIT OF DENNIS P. ALLISON

I, Dennis P. Allison, being duly sworn, do depose and state:

1. My current position is Technical Assistant to the Director of the Division of Emergency Preparedness and Engineering Response in the NRC's Office of Inspection and Enforcement.

2. I was the team leader for the Callaway integrated design inspection conducted by the NRC staff in November and December 1982. The results of this inspection were described in Inspection Report Number 50-483/82-22 dated March 31, 1983. The inspection report discussed an open seismic design issue involving revised floor response spectra for the auxiliary building. Observation 4-1 stated (on pages 4-9 and 4-10):

Floor response spectra are not only used as design loads for civil structures, but also are used as basic input loads for other engineering disciplines, such as piping, mechanical, and electrical equipment. Bechtel had calculated revised floor response spectra using actual as-built conditions for the auxiliary building. Some of the revised spectra exceeded the original spectra that had been used in design, by significant amounts in some cases. The calculations had been completed and checked in August 1981. During our inspection, in December 1982, the effects of these revised spectra had not yet been accounted for in the design. Revised spectra had not yet been sent to the other discipline groups, such as mechanical and electrical, to evaluate the effects of the greater seismic loads upon systems and components.

It was appropriate, in these circumstances, for the Civil-Structural Group to examine means by which the spectra might be reduced before providing the revised seismic inputs to other groups in order to minimize the impact. Judging from the amount of exceedance, however, it appeared that some revised floor response spectra would have to be sent to other groups eventually. The team was concerned about the amount of time taken to achieve a resolution of this matter. The time scale of 16 months without yet achieving a final resolution did not appear consistent with efficient design and project management needs.

A memorandum in May 1982 (Reference 4.127) indicated that the Civil Group had discussed the situation to some degree with other groups. However, the matter had not yet been resolved and new spectra had not been entered in the central file system which was the controlled system for obtaining current response spectra. Our interviews indicated that personnel in other groups were not generally aware of the item. Accordingly, the delay introduced a likelihood that someone might base new work on the older spectra and such work might eventually have to be corrected or justified when the matter was resolved. However, the concern in this regard was not a finding or an open item. No adverse effect on the final design was expected because the issue was recognized, was being worked on and would not have been overlooked.

Accordingly, this delay in dissemination of design input information is mentioned as an area recommended for licensee consideration with respect to efficiency and project management needs. (Observation No. 4-1).

3. Since the licensee was not requested to respond to observations in the report, I participated in two telephone conversations with Bechtel Power Corporation personnel to determine the current status of this matter.

4. Bechtel personnel provided the following information (described in ¶¶ 5-9 below) during these telephone calls:

5. The revised building analysis, which gave rise to the revised floor response spectra, applied to the power block, including the auxiliary building, and was performed to reflect as-built conditions.

6. The structures themselves were reviewed by Bechtel personnel and found adequate with respect to the revised analysis prior to the NRC inspection.
7. Bechtel personnel also used the results of this analysis to develop revised floor response spectra which would pertain to the design and seismic qualification of Category 1 components, structures and systems, including any embedded plates associated with Category 1 components, structures, and systems. The potential effects of the revised floor response spectra had not been evaluated at the time of the NRC inspection.
8. Since the NRC inspection, Bechtel personnel have initiated a review to identify where the design (original) floor response spectra had been used in the design of structures, systems and components and to determine the effects on design, if any, of the revised (increased) floor response spectra. The review is about half done. No design deficiencies have been encountered. The review is scheduled for completion by about the end of 1983. Bechtel personnel plan to prepare an internal report describing the results of the review.
9. Bechtel personnel have completed their review of the 259 manually welded embeds mentioned in Footnote 4 of the Board's Memorandum and Order and found them adequate with respect to the revised analysis.
10. The program described above should, if completed on schedule, assure that the matter is resolved prior to plant operation. The Staff will review the results of the Bechtel program upon its completion.

11. In addition, I would note that the Board's interpretation, given in Footnote 3 of the Board's Memorandum and Order, is correct. The team did not find that the building analysis or the design floor response spectra were incorrect but rather that a revised analysis had been performed to account for as-built conditions that might affect the floor response spectra.

Dennis P. Allison
Dennis P. Allison

Subscribed and sworn to before
me this 4th day of December, 1983.

James L. McLeod
Notary Public

My commission expires: 7/1/86

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF RESPONSE TO APPEAL BOARD MEMORANDUM AND ORDER OF OCTOBER 20, 1983" and "AFFIDAVIT OF DENNIS P. ALLISON" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 4th day of November, 1983:

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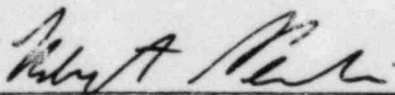
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The entire case is past the appeal board

No appeal to
Commission review 2/17/84.