

May 4, 1982

Ms. Ann Hawk  
Alderson Reporting  
400 Virginia Avenue, S.W.  
Washington, D.C. 20024



In the Matter of  
Union Electric Company  
(Callaway Plant, Unit 1)  
Docket No. STN 50-483 OL

Dear Ms. Hawk:

On April 26, 1982, the Licensing Board in the above-captioned NRC proceeding admitted into the record three documents, including the NRC Staff's Affidavit of Eugene J. Gallagher, and ordered the parties to submit three copies of the relevant documents to Alderson Reporting. Enclosed please find three copies of Mr. Gallagher's affidavit as per the Board's order.

Sincerely,

Robert G. Perlis  
Counsel for NRC Staff

Enclosure: As stated  
cc: (w/o Enclosure)  
James P. Gleason, Esq.  
Mr. Glenn O. Bright  
Dr. Jerry R. Kline  
Thomas A. Baxter, Esq.  
Kenneth M. Chackes, Esq.

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NAME	:R. Perlis/lr	:R. Lessy	:	:	:	:	:	:
DATE	:05/4/82	:05/4/82	:	:	:	:	:	:

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

UNION ELECTRIC COMPANY

(Callaway Plant, Unit 1)

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Docket Nos. 50-483 OL

AFFIDAVIT OF EUGENE J. GALLAGHER

I, Eugene J. Gallagher, being duly sworn, depose and state:

1. I am a civil engineer with the U.S. Nuclear Regulatory Commission. Since February 1981, I have been assigned to the Reactor Engineering Branch, Division of Engineering and Quality Assurance, Office of Inspection and Enforcement. Prior to February 1981, I was a reactor inspector assigned to the Region III, Reactor Construction and Engineering Support Branch, Office of Inspection and Enforcement. I was assigned to the Callaway Plant (among others) during the period of December 1977 through September 1980. A statement of my professional qualifications is appended hereto.

2. As a civil engineer inspector for the Region III office of Inspection and Enforcement I conducted five inspections with respect to the Callaway Plant, Unit 1, in order to: (1) ascertain whether adequate quality assurance plans, instructions and procedures had been established for the construction of concrete structures; (2) provide an independent evaluation of the performance, work in progress and completed work to ascertain whether activities relative to concrete construction were

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accomplished in accordance with NRC requirements, and (3) review the quality related records to ascertain whether these records reflected work accomplished consistent with NRC requirements and license commitments.

3. I filed testimony and testified at the Callaway Operating Licensing hearing on Joint Intervenors' Contention IA regarding embedded plates.

4. The purpose of this affidavit is to respond to Joint Intervenors' Motion For Admission Of Additional Evidence, dated February 19, 1982.

5. I have reviewed the Joint Intervenors' Motion for Admission of Evidence dated February 19, 1982 including the attached document (Blue 675) regarding the Callaway embedded plate issue.

6. The information provided in this document does not raise any significant safety issues nor does it affect my conclusions regarding the acceptability of embedded plates installed at the Callaway plant. The basis for these conclusions are:

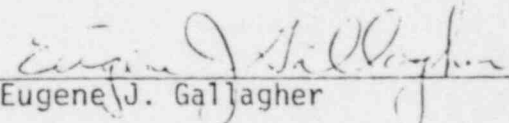
a. The calculated capacity of each plate is based on the allowable design load which is less than the yield limit capacity of the plate and anchor rods. In fact, the Applicant's direct testimony on this issue (Pages 34-35) indicates that the inherent factor of safety is on the order of two. This provides sufficient margin of safety between the actual applied loads and the yield limit of the plate. This method of calculation, as well as Applicant's conclusion, is based on accepted engineering practices.

b. The assumption that the weld undersize is 1/8 inch for a full 360° around the weld and for every stud is most conservative.


Therefore, the reduced capacity of the plate calculated is conservative. The actual capacity of the plates are generally higher.

7. The four plates identified with reduced load capacities equal to the intended design load capacity in Joint Intervenor's Motion (p. 3) does not pose a safety issue for the reason stated in item 6(a) above. Sufficient margin exists between the actual load and the yield limit of the plate and anchor rods, for the reason stated in item 6(a) above.

8. The attached document to Joint Intervenor Motion (Blue 675) does not provide any new information that would affect the conclusions in the previous filed Staff testimony. In fact, the information contained in this document was requested by the NRC during a meeting with Union Electric on April 10, 1980 (see Staff Exhibit 6, NRC Inspection Report 80-14, attachment A, item 17). The document illustrates (a) the calculated design load capacity of each plate using an allowable design load based on 0.6 time the yield strength of the steel (b) the actual applied load associated with each type of embedded plate and (c) the reduced load capacity assuming a 1/8 inch undersized weld a full 360° around the weld. This information had previously been reviewed during the NRC investigation and is documented in NRC Inspection Report 80-14, Page 7, Staff Exhibit 6.

  
Eugene J. Gallagher

Subscribed and sworn to before me  
this 10th day of March, 1982

  
Notary Public

My commission expires: July 1, 1982 .