

Omaha Public Power District

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402/636-2000

October 27, 1993
LIC-93-0270

U. S. Nuclear Regulatory Commission
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Mail Station P1-137
Washington, DC 20555

- References:
1. Docket No. 50-285
 2. Letter from OPPD (W. G. Gates) to NRC (Document Control Desk) dated October 15, 1993 (LIC-93-0258)
 3. CEN-604, Revision 01, "Evaluation of Low Upper Shelf Energy for Combustion Engineering Nuclear Steam Supply Systems Reactor Pressure Vessels," dated September 1993

Gentlemen:

SUBJECT: Updated Information on Reactor Vessel Structural Integrity and Construction Period Recovery for Fort Calhoun Station (TAC Nos. 82834 & 83465)

Recently, staff members from the NRC and Omaha Public Power District (OPPD) discussed information provided in the previous OPPD submittals concerning reactor vessel structural integrity and the construction period recovery for Fort Calhoun Station (FCS). As a result of these discussions and to facilitate staff review of the subject issues, OPPD is providing a copy of the Reference 3 topical report (Enclosure 1).

The plant-specific analysis by ABB Combustion Engineering is contained in Enclosure 2. This analysis used the equations contained in NUREG/CR-5729 to evaluate axial flaws in the 2-410 and 3-410 longitudinal vessel welds. The plant-specific analysis concludes that the longitudinal vessel welds are less limiting than the base plates as analyzed in Reference 3. Therefore, the Reference 3 report has been determined to provide a generic bounding analysis for FCS. The FCS reactor vessel is described in the generic report as 140 inches in diameter.

Although the equivalent margins analysis described above provides assurance of vessel integrity, OPPD will also continue efforts towards satisfactory estimation of initial Upper Shelf Energy (USE) values for welds 2-410 and 3-410. USE values for these welds must be derived from generic data since specific data is not available. OPPD is working with ABB Combustion Engineering to evaluate the effects of different weld flux types on physical properties of the welds; this effort will provide additional confidence in the estimated initial USE values and demonstrate end-of-life compliance with the applicable 10 CFR 50 Appendix G criterion.

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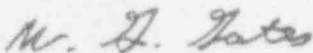
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U. S. Nuclear Regulatory Commission
LIC-93-0270
Page 2

In conclusion, the ABB Combustion Engineering USE report (Enclosure 1) and the FCS weld USE equivalent margins analysis (Enclosure 2) demonstrate that all FCS vessel weld materials will, at the proposed August 2013 end-of-life, have USE values greater than the required 36 ft-lbs documented in Enclosure 2. Based on the above and previously submitted information, OPPD requests expeditious approval by the NRC of the Construction Period Recovery requested for FCS.

Please contact me if you have any questions.

Sincerely,



W. G. Gates
Vice President

WGG/tcm

Enclosures

c: LeBoeuf, Lamb, Leiby & MacRae (w/o enclosures)
J. L. Milhoan, NRC Regional Administrator, Region IV (w/o enclosures)
R. P. Mullikin, NRC Senior Resident Inspector (w/o enclosures)
S. D. Bloom, NRC Project Manager

LIC-93-0270
Enclosure 1

Combustion Engineering Owners Group
Report CEN-604, Revision 01

Evaluation of Low Upper Shelf Energy
for Combustion Engineering
Nuclear Steam Supply Systems
Reactor Pressure Vessels

September 1993