AmerenUE
Callaway Plant

PO Box 620
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October 9, 2008

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop P1-137
Washington, DC 20555-0001

ULNRC-05553

Ladies and Gentlemen:

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
UNION ELECTRIC COMPANY
FACILITY OPERATING LICENSE NPF-30
FOLLOW-UP INFORMATION REGARDING 10CFR50.55a REQUEST: PROPOSED ALTERNATIVE TO ASME SECTION XI REQUIREMENTS FOR REPLACEMENT OF CLASS 3 BURIED PIPING (TAC NO. MD6792)

References:
1. AmerenUE letter ULNRC-05434 dated August 30, 2007
2. AmerenUE letter ULNRC-05490 dated April 17, 2008
3. AmerenUE letter ULNRC-05517 dated July 10, 2008
4. AmerenUE letter ULNRC-05529 dated July 24, 2008
5. AmerenUE letter ULNRC-05542 dated September 15, 2008

By letter dated August 30, 2007 (Reference 1 above), Union Electric Company (AmerenUE) submitted Relief Request I3R-10 regarding paragraph IWA-4221(b) of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI. The relief request, which is still under review by the NRC staff, was submitted to enable planned replacement of buried steel piping in the essential service water (ESW) system at Callaway Plant with high-density polyethylene (HDPE) piping.

Following AmerenUE's initial submittal, additional letters (identified as References 2 through 4 above) were submitted to provide additional or clarifying information requested by the NRC staff. The additional information provided by AmerenUE included two calculations. One of the calculations, provided with the letter of reference 2 above, was a preliminary stress analysis for the new ESW piping configuration, i.e., Calculation 2007-16760, "Analysis of Buried HDPE Piping." The other calculation was provided via the letter of Reference 3 above, and was performed for determining the minimum design wall thickness for the HDPE piping, i.e., Calculation 2007-13241, "Minimum Wall Thickness for ESW Buried HDPE Piping," Revision 0.

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In early September (2008), a telephone discussion was conducted with the NRC staff, wherein AmerenUE was asked to provide updated versions of the subject calculations. Accordingly, Revision 1 of Calculation 2007-13241 and Revision 0 of Calculation 2007-16760 were provided via the letter of Reference 5 above.

After receipt of the updated calculations by the NRC, another telephone discussion was conducted on September 19, 2008, in which the NRC staff identified two notable differences between the versions of the calculations provided via the letter of Reference 5 and the versions provided earlier (via the letters of References 2 and 3). Specifically, it was noted that Revision 1 of Calculation 2007-13241 (the minimum wall thickness calculation) provided results obtained by use of 0.56 design factor, along with results obtained by the expected use of a 0.5 design factor. It was confirmed during the telephone discussion that the results obtained from use of the 0.56 design factor were provided for information only, as indicated in the calculation. The NRC emphasized that their review would be based solely on the use of 0.5 as the value for the design factor.

With regard to the second difference discussed, it was noted that in Revision 0 of Calculation 2007-16760, the thermal gradient stress evaluation that had been provided in the preliminary version was not included. AmerenUE explained that there was a misunderstanding of whether this analysis needed to be included in the calculation. Having provided it once, AmerenUE agreed to include the thermal gradient stress evaluation in a follow-up revision of the calculation to be provided via a follow-up letter to the NRC. In accordance with that agreement, Revision 1 of Calculation 2007-16760 is hereby provided as an enclosure to this letter.

In Revision 1 of Calculation 2007-16760, the thermal gradient stress evaluation is included in a second thermal load case for the HDPE piping. As discussed with the NRC subsequent to the September 19, 2008 telephone discussion, the peak normal operating ESW water temperature was assumed (in lieu of a peak post-LOCA temperature) as appropriate for this case.

This letter serves to document the issues raised in the September 19, 2008 telephone conference, as well as to provide the updated calculation discussed in that telephone conference. No additional commitments are made per this letter. For questions concerning this letter, please contact Mr. Scott Maglio at (573) 676-8719.

Very truly yours,

Luke H. Graessle
Manager - Regulatory Affairs

TBE/nls

Enclosure

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