

March 4, 2009

ULNRC-05600

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



10 CFR 50.46

Ladies and Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
UNION ELECTRIC CO.
FACILITY OPERATING LICENSE NPF-30
10 CFR 50.46 ANNUAL REPORT
ECCS EVALUATION MODEL REVISIONS**

- References: 1) ULNRC-05260 dated 3-9-06
2) ULNRC-05378 dated 3-7-07
3) ULNRC-05475 dated 3-4-08

Attachment 1 to this letter describes changes to the Westinghouse ECCS Large Break and Small Break Loss of Coolant Accident (LOCA) Evaluation Models which have been implemented for Callaway during the time period from March 2008 to March 2009. Attachment 2 provides an ECCS Evaluation Model Margin Assessment which accounts for all peak cladding temperature (PCT) changes resulting from the resolution of prior issues as they apply to Callaway. No new PCT penalties are included in these attachments. References 1 through 3 below provided annual 10 CFR 50.46 reports that were issued after the LOCA analyses were revised to reflect the installation of the replacement steam generators in 2005.

The PCT values determined in the Large Break and Small Break LOCA analyses of record, when combined with all PCT margin allocations, remain below the 2200°F regulatory limit. As such, no reanalysis is planned by AmerenUE.

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This letter does not contain any new commitments. If you have any questions on this report, please contact Mr. Scott Maglio at (573) 676-8719.

Sincerely,

A handwritten signature in black ink that reads "Scott Sandbothe". The signature is written in a cursive style with a large, prominent "S" at the beginning.

Scott Sandbothe
Manager - Regulatory Affairs

GGY/nls

Attachments

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ATTACHMENT ONE

CHANGES TO THE WESTINGHOUSE

ECCS EVALUATION MODEL

AND PCT PENALTY ASSESSMENTS

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1. ERRORS IN REACTOR VESSEL LOWER PLENUM SURFACE AREA CALCULATIONS
2. DISCREPANCY IN METAL MASSES USED FROM DRAWINGS
3. GENERAL CODE MAINTENANCE

1. ERRORS IN REACTOR VESSEL LOWER PLENUM SURFACE AREA CALCULATIONS

Two errors were discovered in the calculations of reactor vessel lower plenum surface area. The corrected values have been evaluated for impact on current licensing-basis analysis results and will be incorporated on a forward-fit basis. These changes represent a closely-related group of Non-Discretionary Changes in accordance with Section 4.1.2 of WCAP-13451.

The differences in vessel lower plenum surface area are relatively minor and would be expected to produce a negligible effect on large and small break LOCA analysis results, leading to an estimated PCT impact of 0°F for 10 CFR 50.46 reporting purposes.

2. DISCREPANCY IN METAL MASSES USED FROM DRAWINGS

Discrepancies were discovered in the use of metal masses from drawings. The updated reactor vessel metal masses and fluid volumes have been evaluated for impact on current licensing-basis analysis results and will be incorporated on a forward-fit basis. These changes represent a closely-related group of Non-Discretionary Changes in accordance with Section 4.1.2 of WCAP-13451.

The differences in the reactor vessel metal mass and fluid volume are relatively minor and would be expected to produce a negligible effect on large and small break LOCA analysis results, leading to an estimated PCT impact of 0°F for 10 CFR 50.46 reporting purposes.

3. GENERAL CODE MAINTENANCE

Various changes have been made to enhance the usability of the codes and to help preclude errors in analyses. This includes items such as modifying input variable definitions, units, and defaults; improving the input diagnostic checks; enhancing the code output; optimizing active coding; and eliminating inactive coding. These changes represent Discretionary Changes that will be implemented on a forward-fit basis in accordance with Section 4.1.1 of WCAP-13451.

The nature of these changes leads to an estimated PCT impact of 0°F on the LBLOCA and SBLOCA analyses of record for Callaway.

ATTACHMENT TWO

ECCS EVALUATION MODEL

MARGIN ASSESSMENT FOR CALLAWAY

LARGE BREAK LOCA

- | | | |
|----|----------------------------------|--------------|
| A. | ANALYSIS OF RECORD (AOR) | PCT = 1939°F |
| B. | PRIOR ECCS MODEL ASSESSMENTS | + 17°F |
| C. | CURRENT LOCA MODEL ASSESSMENTS - | + 0°F |

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LICENSING BASIS PCT + MARGIN ALLOCATIONS	1956°F
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ABSOLUTE MAGNITUDE OF MARGIN ALLOCATIONS SINCE LAST LBLOCA 30-DAY REPORT	17°F
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SMALL BREAK LOCA

- A. ANALYSIS OF RECORD (AOR)
PCT = 1043°F
- B. PRIOR ECCS MODEL ASSESSMENTS
+ 0°F
- C. CURRENT ECCS MODEL ASSESSMENTS -
+ 0°F

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LICENSING BASIS PCT + MARGIN ALLOCATIONS
1043°F

ABSOLUTE MAGNITUDE OF MARGIN ALLOCATIONS
0°F
SINCE LAST SBLOCA 30-DAY REPORT