

December 13, 2004

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

ULNRC-05098

Ladies and Gentlemen:



**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
UNION ELECTRIC CO.
FACILITY OPERATING LICENSE NPF-30
10 CFR 50.59 SUMMARY REPORT**

In accordance with 10 CFR 50.59(d)(2), this letter transmits a report which summarizes the evaluations performed pursuant to 10 CFR 50.59(c)(1) for changes, tests, and experiments approved and implemented for activities at Callaway Plant from January 1, 2003 through June 30, 2004.

This letter does not contain new commitments.

Sincerely,

A handwritten signature in black ink that reads "Keith D. Young".

Keith D. Young
Manager - Regulatory Affairs

Enclosure

IE47

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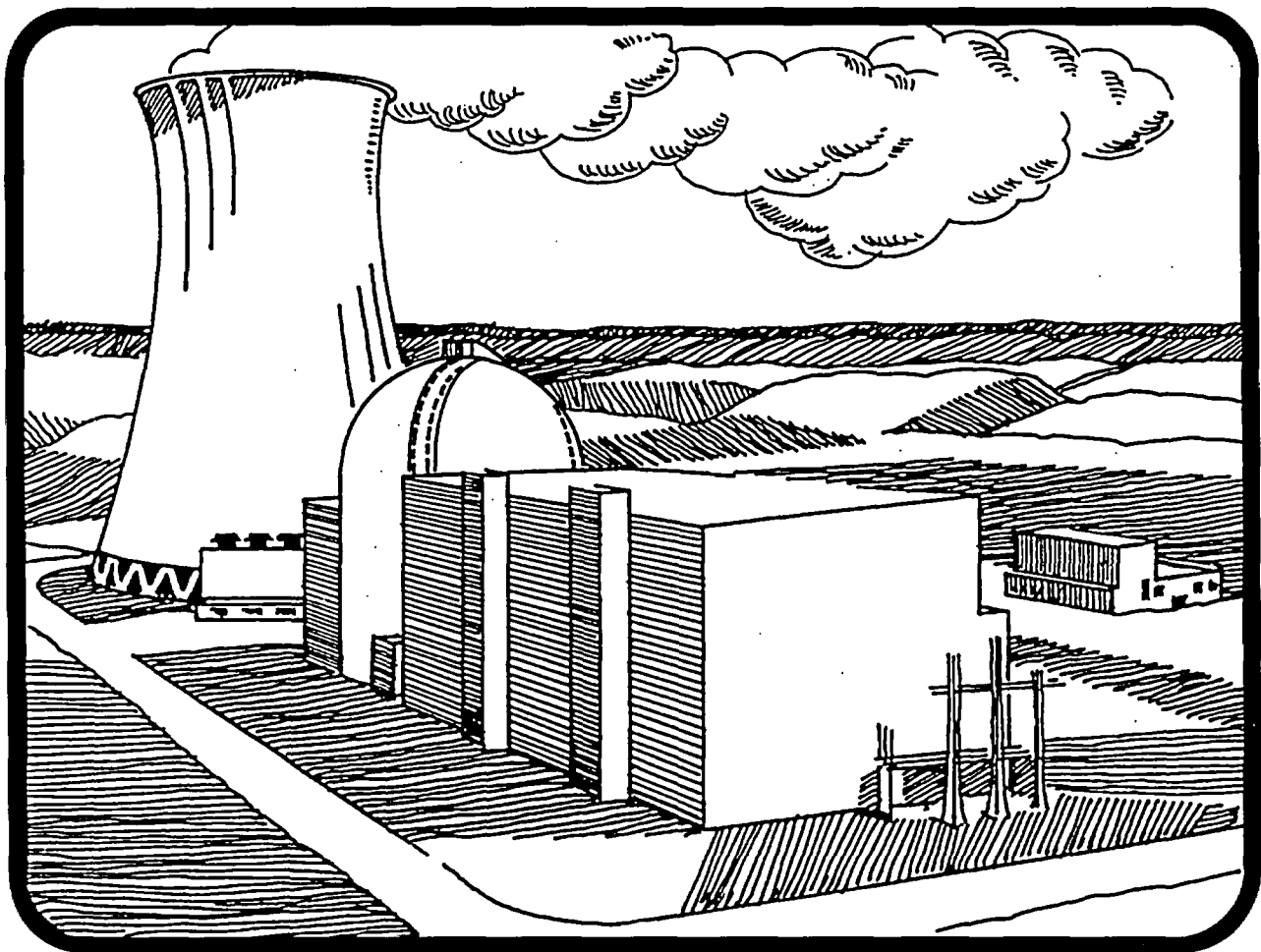
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**UNION ELECTRIC COMPANY
CALLAWAY PLANT**

10CFR 50.59 SUMMARY REPORT

January 2003 — June 2004



CFR 50.59 SUMMARY REPORT FOR CALLAWAY PLANT

7-Dec-04

EXECUTIVE SUMMARY

In accordance with 10 CFR 50.59 (d)(2), the following report was prepared, which provides summaries of the 10 CFR 50.59 evaluations of changes, tests, and experiments approved and implemented for activities at Callaway Plant.

The report covers all 10 CFR 50.59 evaluations that were implemented from January 1, 2003 through June 30, 2004. During this period there were 49 changes, tests, and experiments implemented that required a 10 CFR 50.59 evaluation.

The majority of these evaluations were processed under the old 10 CFR 50.59 rules, for which it was determined that none of these evaluations involve an unreviewed safety question. The remaining evaluations conducted under the new 10 CFR 50.59 rules concluded that none of the proposed changes, tests, or experiments require a license amendment pursuant to 10 CFR 50.90.

CFR 50.59 SUMMARY REPORT FOR CALLAWAY PLANT

7-Dec-04

REFERENCE/ABBREVIATION KEY

CN — FSAR Change Notice.

MODIFICATION PACKAGES (Design Changes)

- CMP — Callaway Modification Package
- RMP — Restricted Modification Package
- EMP — Exempt Modification Package

RFR — Request for Resolution

CARS — Callaway Action Request System

TM — Temporary Modification

TSI — Technical Specification Interpretation

W — Work Control Document

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08-Dec-04

CN 04-019

REVISE FSAR SPECIFIED THICKNESS FOR INNER CONTAINMENT COATINGS

The increased coating film thicknesses addressed by the FSAR Change Notice involved no changes to the qualifications of the containment coating or its ability to withstand a post-MSLB or post-LOCA containment environment. The coating remains qualified to the DBA and irradiation testing parameters required by Reg. Guide 1.54, ANSI N101.2, ANSI N101.4 and ANSI N5.12. The proposed increase in coating film thickness is bounded by the DBA and irradiation testing parameters for the coating system. The increased coating film thickness involved no change to the ability of the coating to withstand a post-MSLB or post-LOCA environment, and no change to the coating's potential to fail and be transported to the containment recirculation sumps.

AmerenUE Calculation ZZ-520, Rev 0 was performed to re-analyze the post-accident (LOCA and MSLB) containment pressure and temperature assuming variations in containment passive heat sink coating thicknesses. Results show that a thickness of 4 mils of inorganic zinc paint covered by 21.2 mils of epoxy can be allowed without causing an adverse impact on the peak post-accident containment pressure and temperature values described in the FSAR. FSAR Change Notice 04-019 updated FSAR Table 6.2.1-4 to reflect this new allowable containment coating thickness.

Based on the re-analyses documented in Calculation ZZ-520, Rev. 0, and the answers to the Eight 10CFR50.59 Evaluation questions documented in the complete evaluation, this activity could be implemented without obtaining a License Amendment. Increased coating thickness has been found to not have an adverse impact on FSAR analyses regarding the frequency and consequences of analyzed accidents and equipment malfunctions related to analyzed accidents.

It was concluded that this activity may be implemented without prior NRC approval.

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CMP 00-1035

Replace ESW Carbon Steel Piping and Valves with Stainless Steel.

Modification 00-1035 replaced Essential Service Water (ESW) carbon steel piping and valves with stainless steel, eliminated unused vents and drains, installed an extra set of flanges near the room cooler coils, and added isolation valves on the supply and return lines for the A Spent Fuel Pool Pump Room Cooler. The existing carbon steel piping had experienced corrosion related degradation which has caused reduced flow and pitting of the pipe wall resulting in pin hole leaks. These changes to the ESW system did not alter the function of the system, and the ASME Code requirements are still being met.

These changes did not result in an unreviewed safety question.

CMP 03-1012

Cycle 14 Core Design

In the Callaway Cycle 14 Core Design, Westinghouse used version 4.0 of the PAD code to verify that fuel rod design criteria had been met. This was the first time this version of the code was used at Callaway. Westinghouse also replaced the criterion for hydrogen content for fuel assembly structural components with a structural component stress criterion that accounts for material thinning due to corrosion.

These changes were not a departure from a method of evaluation as described in the FSAR because Westinghouse obtained NRC approval to use these methodologies. This is consistent with the 10 CFR 50.59 Resource Manual definition of what is not a departure from a method of evaluation as described in the FSAR.

It was concluded that this activity may be implemented without prior NRC approval.

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CMP 98-1032

Replace Hydrogen/Oxygen Analyzer System in Gaseous Radwaste System.

This modification replaced the existing Teledyne analyzers in the Gaseous Radwaste system with digital equipment consisting of Orbisphere model 3636 hydrogen/oxygen analyzers. This change was required since the existing hydrogen/oxygen analyzers were obsolete and needed to be replaced. The new analyzers perform the same functions as the previous analyzers, and changes made to the analyzer testing requirements provide verification of operability of the new analyzers that is equivalent to the verification performed for the old analyzers.

This modification did not impact the frequency, consequences, or method of evaluation for any accident or malfunction previously evaluated in the FSAR. It also did not create the possibility of an accident of a different type or a malfunction with a different result than any previously evaluated in the FSAR. Also, there was no impact on any design basis limits for a fission product barrier as a result of this modification. Based on these results, it was determined that no unreviewed safety question exists and that a license amendment is not required prior to implementing this modification.

CMP 98-1040

Replace Carbon Steel Ladders and Platforms in ESW Pumphouse Pump Bay.

CMP 98-1040 replaced carbon steel ladders and intermediate platforms with stainless steel in the two Essential Service Water (ESW) pumphouse pump bays. The ladders and intermediate platforms were designed and installed to remain operable following a Design Basis Safe Shutdown Earthquake. In addition, a maintenance trolley beam on the exterior of the pumphouse was extended 11 feet to improve the useable travel range of its hoist. The trolley is on the exterior of the Pumphouse and does not need to withstand any credible design basis event since its failure would not adversely affect safety related systems, structures, or components.

Based on these results, the modifications did not adversely affect structures, systems or components important to nuclear safety and no unreviewed safety question was created by this change.

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CMP 98-1041

Install 12 Isolation Valves in the ESW to Allow On-line Pipe Replacement.

This modification installed 12 new stainless steel manual isolation valves in the Essential Service Water (ESW) system to facilitate on-line replacement of several room coolers carbon steel ESW supply and return pipes with stainless steel. In addition, the carbon steel pipe adjacent to the valves was also replaced with stainless steel. The original system code design requirements were met for all activities associated with this modification. This change allows the bulk of the pipe replacement on these lines to be performed on-line when the room radiation levels are lower and there is more time available. These changes did not adversely affect the operation or function of the ESW system nor any interconnected systems. This modification did not impact the frequency, consequences, or method of evaluation for any accident or malfunction previously evaluated in the FSAR.

Therefore, no unreviewed safety question was created by this modification.

CMP 99-1021

Remove Safety Relief Valves GKV0769 thru GKV0772 on HVAC SGK04A/B and 05A/B.

This modification removed the relief valves from the tube side of the control room and Class IE equipment room air-conditioning condenser units. The 1989 Edition of the ASME Code Section III Class 3 allows the removal of these valves based upon the contents of the Overpressure Protection Report. The relief valves are not required when the ESW system is aligned with the air conditioning condenser units. If the units are isolated and thus inoperable then the ASME code does not require overpressure protection. This change did not result in an unreviewed safety question.

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CMP 99-1046

Distributed Control System Cabinet Installation.

Revision A of this modification installed the necessary cabinets, floor penetrations, conduit and supports to house the non-safety related portion of the Callaway Distributed Control System (DCS) backbone computer and communication hardware in the rear panel area of the main control board. No active devices or components were installed by revision A. The actual computer and communications hardware for the DCS were to be installed per a later revision to this modification.

This evaluation and associated Design Input Report for the modification demonstrated that no unreviewed safety question exists.

RMP 98-2008

Addition of Hydrogen Leak Monitoring System to the Stator Cooling Water System.

This modification added a hydrogen detection system to the stator cooling water tank to provide early indications of the incipient failure of a stator bar due to crevice corrosion. The modification provides on-line hydrogen leakage monitoring of the main generator stator cooling water system and positive aeration of stator cooling water to keep dissolved oxygen in proper range. There was no adverse affect on the stator cooling water system. Due to the location and benign nature of this modification, it does not create an operability concern nor adversely affect structures, systems or components important to nuclear safety.

It was concluded that implementation of this change would not result in an unreviewed safety question.

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08-Dec-04

RMP 99-2003

Capacity Upgrade of the Stock bridge Crane.

This modification upgraded the capacity of the Stock bridge crane from 7.5 tons to 9.33 tons. The modification also installed remote radio crane controls. All material used for the upgrades were furnished by the original crane manufacturer. Calculations were performed to verify that the crane runway and supporting columns have sufficient capacity to support the crane upgrade. This crane is located in the Radwaste building and does not effect any structures, systems or components important to safety. It was concluded that that an unreviewed safety question does not exist for this modification.

RFR 22046

Zinc Addition to the Reactor Coolant System

The reactor coolant system (RCS) chemistry program was modified to allow the addition of a soluble zinc compound to the RCS during normal plant operation. The addition of zinc to the RCS will be performed as a means to reduce radiation fields within the primary system and inhibit general corrosion and PWSCC.

Use of zinc addition at other plants has shown that it is effective in reducing radiation dose and does not have an adverse effect on the structures, systems, or components. The evaluation of the proposed chemistry control program changes confirmed that zinc addition will not adversely affect any component or system in the reactor coolant system. The evaluation demonstrated that potential hydrogen generation, effect on pH, and boron dilution do not have an adverse effect on the operation of the plant or the design function of the reactor coolant pressure boundary and fuel cladding. The addition of zinc was also determined to not have a significant effect on axial offset anomaly, or any significant impact on operating procedures.

It was concluded that this activity may be implemented without prior NRC approval.

Additional documents changed under this evaluation:
ETP-ZZ-ST026, Revision 000.
