May 17, 2002

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555-0001

Gentlemen: ULNRC-4663

DOCKET NO. 50-483
CALLAWAY PLANT
UNION ELECTRIC COMPANY
60-DAY RESPONSE TO NRC BULLETIN 2002-01
"REACTOR PRESSURE VESSEL HEAD DEGRADATION AND REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY"

Reference: ULNRC-4630 dated April 1, 2002

Attached is the Callaway Plant response to the 60-day requirements of U.S. Nuclear Regulatory Commission (NRC) Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity" dated March 18, 2002. NRC Bulletin 2002-01 Item 3.A requested information relative to reasonable assurance that our boric acid inspection program is in compliance with the applicable regulatory requirements for the remainder of the reactor coolant pressure boundary. Callaway Plant coordinated preparation of this response with the other participants in the Strategic Teaming and Resource Sharing (STARS) group.

If you should have any questions regarding this submittal, please contact us.

Very truly yours,
Original signed by
David E. Shafer for

John D. Blosser
Manager - Regulatory Affairs

BFH/mlo

Attachments: I - Affidavit
II - 60 day Response to NRC Bulletin 2002-01
III - List of Commitments

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STATE OF MISSOURI)
) S S
CITY OF ST. LOUIS)

David Shafer, of lawful age, being first duly sworn upon oath says that he is Superintendent Licensing, Regulatory Affairs, for Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By _____
David Shafer
Superintendent Licensing
Regulatory Affairs

SUBSCRIBED and sworn to before me this _____ day

of _____, 2002.

_____

Response to NRC Bulletin 2002-01
Reactor Pressure Vessel Degradation and
Reactor Coolant Pressure Boundary Integrity

Below is the Callaway response to the 60-day requirements of Nuclear Regulatory Commission (NRC) Bulletin 2002-01, Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity, dated March 18, 2002. The bulletin's "Required Information" is shown in bold.

NRC Requested Information

3. Within 60 days of the date of this bulletin, all PWR addressees are required to submit to the NRC the following information related to the remainder of the reactor coolant pressure boundary:

A. the basis for concluding that your boric acid inspection program is providing reasonable assurance of compliance with the applicable regulatory requirements discussed in Generic Letter 88-05 and this bulletin. If a documented basis does not exist, provide your plans, if any, for a review of your programs.

Callaway Plant Response:

Callaway Plant boric acid inspection program provides assurance of compliance with the applicable regulatory requirements discussed in GL 88-05 and Bulletin 2002-01.

The Generic Letter 88-05 boric-acid leakage inspection program is described in Callaway Plant ULNRC-4630, "Response to NRC Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity" dated April 1, 2002. Callaway Plant's policy is to minimize boric acid induced corrosion by applying an administrative program that provides for: (1) early detection of boric acid leaks; (2) thorough inspection of the areas surrounding identified boric acid leakage; (3) proper evaluation of areas where leakage has occurred; and (4) prompt action to mitigate the leak, perform repairs, and avoid future damage. This program applies to any system within containment that contains boric acid, and systems, structures or components that could be adversely affected by leakage from systems containing borated water.

In response to Generic Letter 88-05, Callaway Plant established a program to inspect all boric acid leaks discovered in the containment building and to evaluate the impact of those leaks on carbon steel or low alloy steel components. All evidence of leaks, including boric acid crystals or residue, is inspected and evaluated regardless of whether the leak was discovered at power or during an outage. Issues such as the following are considered in the inspection and evaluation: 1)

evidence of corrosion or metal degradation, 2) effect the leak may have on the pressure boundary, 3) possibility of boric acid traveling along the inside of the insulation on piping, and 4) possibility of dripping or spraying on other components. Based on this evaluation, appropriate corrective actions are initiated to prevent reoccurrence of the leak and to repair, if necessary, any degraded materials or components.

Boric acid leakage is identified during program-required walkdowns, the system leakage test required by ASME Section XI for the Code Class 1 pressure boundary (including the RCS) and during periodic containment walkdowns by station personnel of accessible areas.

The walkdowns required under the boric acid corrosion control program are performed by in-service inspection, engineering, and/or maintenance personnel. The objective is to identify boric acid leakage from any source inside containment with particular emphasis on locations where boric acid corrosion of ASME Code Class 1 low alloy/carbon steel reactor coolant pressure components may be affected. A listing of piping, and components that are potential sources of boric acid leakage is maintained in plant programs and procedures governing the boric acid corrosion control program. The walkdowns include a comprehensive inspection of components located in containment, in addition to reactor coolant pressure boundary sources. The walkdowns are begun each refueling outage, after entry into Mode 3 to ensure timely inspections to preserve evidence of boric acid leakage prior to maintenance activities.

The ASME Section XI system leakage test and VT-2 inspection is performed at normal operating pressure following a refueling outage, or other outage where the reactor coolant pressure boundary integrity has been affected. As a minimum it includes all joints that have been opened and closed since the last performance of the test. This inspection includes the reactor pressure vessel head with the insulation installed. The walkdown is conducted by certified VT-2 level II personnel, and is witnessed or verified by the Authorized Nuclear Inservice Inspector (ANII). This inspection also includes a comprehensive inspection of accessible portions of the reactor coolant pressure boundary.

As allowed by the ASME Code, approved code cases and relief requests, insulation is not required to be removed during the ASME-required system leakage test. However, if leakage from insulated components is found, insulation is removed to identify the leakage source and evaluate potential degradation. If leakage is identified, corrective action is taken to correct the leakage, or an evaluation is done to ensure the leakage has no adverse impact on continued operation. Technical Specifications dictate that no pressure boundary leakage is acceptable in Class 1 systems, therefore Class 1 pressure boundary leakage requires corrective action to correct the leakage.

During power operations, walkdowns of accessible containment areas are performed by station personnel. These walkdowns include observations for evidence of RCS leakage. Identified leakage is entered into the corrective action program and appropriate actions are taken to control

the leak and protect systems, structures and components.

Callaway Plant corrective actions include cleaning, tightening flange bolting or valve packing, repacking, or replacement. Through-wall pressure boundary leakage is repaired in accordance with Callaway Plant's repair and replacement program. Evidence of leakage such as dry boric acid deposits are tracked in the corrective action program to ensure timely evaluation and corrective action. The initiation of the corrective action document identifies the location of the leak; the leak rate and whether the leak is causing damage to other components.

The Callaway Plant operating experience review program evaluates boric acid corrosion experience at other plants. Where applicable, that experience is factored into the boric acid leakage program to prevent similar events from occurring at Callaway Plant.

In implementing the boric acid leakage program, Callaway Plant has taken steps to minimize the potential for boric acid corrosion and to improve the boric acid leakage identification process.

Based on the above, the Callaway Plant boric acid inspection program provides assurance of compliance with the applicable regulatory requirements discussed in GL 88-05 and Bulletin 2002-01. In addition, AmerenUE has benchmarked our program against industry peers and has identified some improvement areas. These will be incorporated in our program prior to Refuel 12, Fall 2002.

LIST OF COMMITMENTS

The following table identifies those actions committed to by Callaway Plant in this document. Any other statements in this submittal are provided for information purposes and are not considered to be commitments. Please direct questions regarding these commitments to Mr. Dave E. Shafer, Superintendent Licensing (314) 554-3104.

COMMITMENT	Due Date/Event
Revise boric acid inspection program to incorporated improvement area identified during benchmarking of industry peers.	Refuel 12