Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

September 15, 2014

10 CFR 50.54 (f)

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Browns Ferry Nuclear Plant, Units 1, 2, and 3
Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68
NRC Docket Nos. 50-259, 50-260, and 50-296

Subject: Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3 - Response to Generic Letter (GL) 89-13 - Correction to BFN Response to GL 89-13 Actions II and III

References:
1. Tennessee Valley Authority (TVA) Letter to the NRC, "Browns Ferry Nuclear Plant (BFN) - Response to Generic Letter (GL) 89-13 Service Water System Problems Affecting Safety-Related Equipment," dated March 16, 1990
2. NRC Letter to TVA, "Issuance of Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68 for Browns Ferry Nuclear Plant, Units 1, 2, and 3 (TAC Nos. MC1704, MC1705, and MC1706)," dated May 4, 2006
3. Generic Letter (GL) 89-13, "Service Water System Problems Affecting Safety-Related Equipment (Generic Letter 89-13)," dated July 18, 1989

The purpose of this letter is to notify the NRC of changes to information previously provided in BFN's original response to Generic Letter (GL) 89-13 (Reference 1) and contained in the NRC's Safety Evaluation for the Issuance of Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68 for Browns Ferry Nuclear Plant, Units 1, 2, and 3 (Reference 2). These changes pertain to BFN's original response to Items II and III of GL 89-13 (Reference 1).

GL 89-13 (Reference 3) requested in Item II, in part, that the licensees and applicants conduct a test program to verify the heat transfer capability of all safety-related heat exchangers cooled by service water. The total test program should consist of an initial test program and periodic retest program. Both the initial test program and the periodic retest program should include the heat exchangers connected to or cooled by one or more open-cycle systems.

On March 16, 1990, the Tennessee Valley Authority (TVA) responded to GL 89-13 Item II (Reference 1) by stating that BFN's current program of regular testing and cleaning of heat

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exchangers will be revised to become an equally effective alternative to the NRC recommended test program and satisfies the intent of the generic letter.

The purpose of the recommended test program is to verify the heat transfer capability of safety-related heat exchangers. Upon poor test results, the affected heat exchanger would be inspected and cleaned.

The BFN inspection program contains, in part, the heat exchanger for the Unit 1/2 Emergency Chiller. As part of the action discussed in the GL 89-13 response, TVA stated that it would inspect and clean the cooling water side of the Unit 1/2 Emergency Chiller annually.

In 2007, the Unit 1/2 Emergency Chiller was removed from ASME OM Code testing as a result of the code boundary being moved. Since the Unit 1/2 Emergency Chiller is not safety related and is not credited with a safety function to remove heat to the Ultimate Heat Sink. Therfore, the Unit 1/2 Emergency Chiller is no longer required to be within the scope of GL 89-13.

GL 89-13 (Reference 3) requested in Item III, that licensees and applicants establishing a routine inspection and maintenance program for open-cycle service water system piping and components, that corrosion, erosion, protective coating failure, silting, and biofouling cannot degrade the performance of the safety-related systems supplied by service water. The program should have at least the following purposes:

A. To remove excessive accumulations of biofouling agents, corrosion products, and silt;

B. To repair defective protective coatings and corroded service water system piping and components that could adversely affect performance of their intended safety functions.

TVA responded to GL 89-13 Item III, by stating that since the Residual Heat Removal Service Water (RHRSW) and Emergency Equipment Cooling Water (EECW) piping systems are not internally coated, no inspections for paint integrity are made. Since the initial response, it has been determined that the response to GL 89-13 was silent on the heat exchanger cooled by the RHRSW and EECW systems. Furthermore, it was determined that some heat exchangers cooled by the RHRSW and EECW systems have been determined to contain protective coatings. This discrepancy has been documented in the TVA's Corrective Action Program. The existing program documents require inspection of the heat exchanger coating.

Additionally, in the Safety Evaluation for the issuance of the Renewed Facility Operating Licenses for Browns Ferry Nuclear Plant, Units 1, 2, and 3 (Reference 2), the NRC states, under the Aging Management Programs (Section 3.0.3.2.11), the following:

"The OCCW [Open-Cycle Cooling Water] System Program relies on implementation of the recommendations of GL 89-13 to ensure that the effects of aging on the OCCW system will be managed for the extended period of operation. The program includes

surveillance and control techniques to manage aging effects caused by biofouling, corrosion, erosion, protective coating failures, and silting in the OCCW system or structures and components serviced by the OCCW system.

Implementation of GL 89-13 activities provides for management of aging effects due to loss of material, fouling due to micro- or macro-organisms, and heat transfer aging effects in raw water cooling water systems. The applicant does not utilize protective coatings in any raw water systems, as addressed in IN 85-24. Therefore, protective coating failures do not apply to BFN."

TVA is hereby notifying the NRC that the implementation program for GL 89-13 does not require flow testing of the Unit 1/2 Emergency Chiller as currently listed in the response to GL 89-13 Item II. Additionally, TVA is hereby notifying the NRC that the implementation program for GL 89-13 requires an inspection for paint integrity on open-cycle service water systems components (i.e., heat exchangers).

There are no new regulatory commitments contained in these letter. Please address any questions concerning this matter to Jamie Paul at (256) 729-2636.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this the 15th day of September 2014.

Respectfully,

K. J. Polson
Vice President, Browns Ferry Nuclear Plant

cc:
NRC Regional Administrator – Region II
NRC Senior Resident Inspector – Browns Ferry Nuclear Plant
NRC Project Manager - Browns Ferry Nuclear Plant
NRC Branch Chief - Region II
State Health Officer, Alabama State Department of Health