Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381

OCT 3 0 1995

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

Gentlemen:

In the Matter of the Application of) Docket Nos. 50-390
Tennessee Valley Authority

WATTS BAR NUCLEAR PLANT (WBN) - COMPLETION OF THE MICROBIOLOGICALLY INDUCED CORROSION SPECIAL PROGRAM

The purpose of this letter is to notify NRC that TVA has completed the Microbiologically Induced Corrosion (MIC) Special Program as defined in the Watts Bar Unit 1 Nuclear Performance Plan, Volume 4, Revision 1. The stated objectives of the program have been met.

The enclosure to this letter describes the program implemented, provides closure dates for the remaining actions which were listed in the MIC Special Program Final Report, and provides an update on events leading to closure of the program.

The documentation package (100% Book) for this program has been updated and is available for review. If you should have any questions, contact P. L. Pace at (423) 365-1824.

Sincerely,

R. R. Baron
Nuclear Assurance
and Licensing Manager (Acting)

Enclosure
cc: See page 2

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cc (Enclosure):
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ENCLOSURE

In August 1986 a through-wall leak of approximately seven drops per minute was discovered in the 12-inch Type 316 austenitic stainless steel Essential Raw Cooling Water (ERCW) line at WBN. A detailed evaluation identified the cause of the leakage as Microbiologically Induced Corrosion (MIC) at a butt weld with 316 stainless filler metal. Since that time, MIC has been responsible for leaks and various other material damage noted on both carbon and stainless steel piping materials associated with the raw water systems. This damage potentially affects the flow rates and the structural integrity of the piping and equipment systems.

The MIC Special Program was implemented to control MIC in the Essential Raw Cooling Water (ERCW), the Condenser Circulating Water (CCW), the Raw Service Water (RSW), the Raw Cooling Water (RCW), the inlet to the Make-up Water Treatment System, and the High Pressure Fire Protection (HPFP) systems at WBN and to ensure the existing systems comply with design requirements.

In August 1993 TVA submitted a final report on the program which concluded that except for some ongoing activities noted in the report, the commitments relative to the implementation of a MIC program at WBN Unit 1 have been completed. The remaining items at that time are listed below and their date of completion:

1. **Revise TI-79, Heat Exchanger Performance Testing Technical Instruction/ Close IFI 93-09-01.**

   TI-79.000, Revision 1, was issued to support Generic Letter 89-13 testing. Sections 6.2.1 proceduralizes the requirement that the results of the test are to be used by Plant Chemistry in their evaluation of the chemical treatment program.

   IFI 93-09-01 was closed by NRC in Inspection Report 390/94-04 dated February 23, 1994.

2. **Install Additional HPFP Flush Connections (Design Change Notice M-16020).**

   Design Change Notice (DCN) M-16020 was completed October 21, 1994.

3. **Revise TI-31.013, Wall Thinning Monitoring program.**

   TI-31.013, Appendix B.1, has been revised to incorporate review criteria. Section 1.3C provides a performance frequency which specifies examination at intervals of six months for established grids. Section 1.3C provides a performance frequency which specifies examination at intervals of six months for established grids. It also states that the examinations shall be completed by January 1 and July 1 of each calendar year.

4. **Complete Work Order(s) to install quick-disconnect injection connections to spool piece flanges to implement DCN W-26454.**

DCN W-26454 was completed June 6, 1994.

Revise Chemistry Manual Chapter 4.05, "Non-Oxidizing Biocide Injection," to incorporate chemical treatment using quick-disconnect fittings.

Chemistry Manual, Chapter 4.05, Section 4.2, contains instructions to obtain the sections of flush hose equipped with Parker (quick) disconnects from the chemistry storage cage. Section 6.4 provides instructions and locations for the flushing and sampling.

Complete closure of NCO890112036.

NCO89112036 was completed June 28, 1994.

5. **Revise TI-36, "Control of Microbiologically Induced Corrosion at Watts Bar Nuclear Plant."**

TI-36 has been superseded by SSP-6.12C, "Raw water Fouling and Corrosion Control Program." SSP-6.12C, Section 7.2 states that Nuclear Engineering will perform an overview of all elements of the site sampling plan on a periodic basis, not to exceed twenty four months, to assess the program effectiveness and adjust the program as required.

6. **Perform initial surveillance flow test of non-safety related HPFP standpipes on the Auxiliary Building, Diesel Generator Building, and the Intake Pumping Station.**

Fire Operation Requirement 0-FOR-26-2, "3 Year High Pressure Fire Protection Hydraulic Performance Verification," is performed at least once per year for three years. At the end of three years, it will be re-evaluated for frequency and need. The initial performance has been completed under Work Order (WO) 95-10176-00.

7. **Complete Incident Investigation Report involving the release of bromide gas from BCDMH tank and evaluate recommendations.**

Incident Investigation Report II-W-93-018 was completed November 3, 1993.

During September and October 1993, NRC performed an inspection which evaluated and examined the remaining documentation packages and areas identified in a letter dated November 12, 1992, from NRC to TVA titled, "Documentation Packages to Support Inspections of Corrective Action Plans and Special Programs." The inspection also addressed those items that were identified as open issues from a previous 75% inspection.

The inspectors determined that the licensee had successfully implemented the MIC Special Program with noted exceptions:

> Inspector Follow-up Item 93-09-01 - Utilization of Heat Exchanger Efficiencies for MIC Program Evaluations
>
> Inspector Follow-up Item 93-09-04 - Analysis of ERCW Piping in the Containment Penetrations

Within the areas inspected, violations or deviations were not identified and the Special Program was closed. NRC later closed Inspection Follow-up Items 93-09-01 and -04 in Inspection Report 390, 391/94-04.