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MAR 18 1994

U.S. Nuclear Regulatory Commission
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Gentlemen:

In the Matter of the Application of	)	Docket Nos. 50-390
Tennessee Valley Authority	)	50-391

WATTS BAR NUCLEAR PLANT (WBN) - UNITS 1 AND 2 - NRC INSPECTION REPORT NO. 390, 391/93-86 - RESPONSE TO UNRESOLVED ITEM

The purpose of this letter is to provide a response to the staff concerns expressed during the recent review of the QA record plans and records for Electrical Equipment, Instrument Line Supports, and Foundations and Concrete Structures. These concerns were documented in NRC Inspection Report 390, 391/93-86, dated January 24, 1994.

Although the inspection determined that the record plans for Instrument Line Supports, and Foundations and Concrete Structures were satisfactory, the plan for Electrical Equipment was deemed to have some technical deficiencies. Consequently, the staff questioned the overall technical adequacy of the remaining QA record plans. TVA provided a formal response to this concern in a submittal dated January 21, 1994, "Reverification Plan to Assure Adequacy of the Additional Systematic Record Review (ASRR) Record Plans."

A second staff issue involved the technical adequacy of the bounding analysis for sampling of Instrument Line Supports. This concern was documented as Unresolved Item (URI) 93-86-02, "Adequacy of Sample Bounding for a QA Records CAP." The TVA basis and assessment of this bounding analysis is discussed in the enclosure to this letter.

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If you should have any questions, contact P. L. Pace at (615)-365-1824.

Very truly yours,

William J. Museler

Enclosure
cc (Enclosure):
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ENCLOSURE

RESPONSE TO URI 93-86-02

NRC Concern:

The NRC inspector expressed a concern about the technical adequacy of the bounding analysis for sampling of instrument line supports contained in calculation SD3-023. The inspection report requested that TVA review the analysis and furnish a written response which demonstrated the adequacy of the original assessment. It further asked for an assessment of the adequacy of other areas where sampling was used as a licensing basis for WBN.

TVA Response:

The calculation which evaluates the sample for the Instrument Line Support CAP, SD3-023, was revised (Revision 5) to clarify the reference to EAI-8.04 (formally WBEP-3.15). EAI-8.04 is referenced to provide substantiation that the sample size used in the re-inspection documented in SD3-023 is consistent with the sample size required for a zero-defect sampling plan with 95 percent confidence level and 95 percent reliability.

The two supports (NI-072-0024 and FOS-2800) were reviewed with the inspector during the QA record plan inspection. It was shown that the first support (NI-072-0024) was stronger than the typical and would be similar to other samples in the validation program. The second support (FOS-2800) dealt with a weld variance and TVA provided an informal calculation to the inspector to show the support is adequate. Thus, both of these supports were considered examples of the broader issue and not a specific concern.

The sample size of 60 supports selected in 1986 as part of Nonconformance Report (NCR) W334P was consistent with conventional sampling methods in existence then. The sample size has been further validated with subsequent industry standards [e.g., Nuclear Construction Issues Group (NCIG) recommends a sample size of 58 for this size of population]. The sample evaluations contain conservatisms and some inherent bounding of conditions. The integrity of the results and conclusions of the sample have been tested several times [WBP900115SCA, WBPER920070, F-type Design Change Notice (DCN) group closures]. Nonconformance report WBP900115SCA, initiated in March 1990, reviewed 100% (approximately 340 supports) of the supports in System Group 1 (i.e., Systems 32, 67, and 70). The total population (approximately 1300) was covered by an additional random sample of 58. Those supports which did not comply with the typical were evaluated and found acceptable with no hardware changes required. Nonconformance report WBPER920070 was written during the QA Records review. This review inspected 72 randomly selected instrumentation supports and 72 instrument lines. Two problem areas were identified; five clamps with bolts under-torqued and two instrument lines which went through the wrong sleeve. These conditions were evaluated with no hardware changes required. The cumulative number of supports inspected and evaluated with these reviews, along with the 60 supports reviewed for W334P, is greater than 500, with no resultant hardware changes. Note that W334P requires 100% of the clamps to be properly installed. An expanded review for this inspection report looked at the interaction factors (% of allowable) for the evaluated attributes (clamp, member stress, deflection, weld, concrete anchor

bolts, and baseplate stress) of the 60 samples in NCR W334P. The results are as follows:

1. Less than 10% of the attributes exceeded 90% of the allowable.

2. The overall average interaction factor for the controlling attribute for each support is approximately 0.65 (65% of the allowable).

Based on the above, the subject sample of 60 supports for NCR W334P provides reasonable assurance of support qualification and qualifies as a primary QA record for purposes of the Instrument Line Support Record Plan.

Employee Concern/Corrective Action Tracking Document (CATD) Number 80407-WBN-01 addressed this same issue. The employee concern reviewed 73 NCRs, selected from those which used sampling as the method for resolution. This CATD reviewed the corrective actions associated with the issues regarding the use of sampling at WBN. The corrective action plan (CAP) for this CATD was as follows: 1) issue WBEP-3.15 which provided guidance for sampling used at WBN; and 2) review all prior CAQs that used sampling for acceptance of installed hardware to assure that the sampling was in accordance with recognized and acceptable standards.

Additional CAQs were to be issued to correct any sampling programs found to be unacceptable. The CATD was revised to note the revision of Site Standard Practice (SSP)-3.04, SSP-3.06, SSP-3.07, and SSP-12.09 to reference EAI-8.04 (EAI-8.04 superseded WBEP-3.15) in response to previous NRC Inspector Follow-Up Item (IFI) 390, 391/93-42-01.

A re-review of the 73 CAQs discussed above was performed. This review was done in order to comply with the inspector's request to review any other areas where sampling was being used as a licensing basis for Watts Bar. The review of these CAQs focused on the following questions:

1. Did the sample produce any discrepant items? (If no discrepant items were found, no bounding analysis was required by EAI 8.04.)

2. Was the CAQ and resulting sample covered by a later CAP? [i.e., Hanger Analysis and Upgrade Program (HAAUP), Conduit, Cable Tray, Heating, Ventilation, and Air Conditioning (HVAC) CAPs, etc.) (If the sample is covered by a subsequent program, no further action on the CAQ was required.)

In all cases, either the CAQ had a later program (CAP) which covered it or no discrepant items were found. This indicates that the samples would meet the requirements of EAI-8.04 or were being done under an NRC approved corrective action program. Some additional lookback administrative concerns are presently being resolved.