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MAR 31 1988

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) 50-391

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2 - REGION II INSPECTION REPORT NOS. 50-390/87-13 AND 50-391/87-13 - RESPONSE TO NOTICE OF VIOLATION 390, 391/87-13-01

This is in response to Kenneth P. Barr's letter dated February 24, 1988, which transmitted inspection report Nos. 50-390/87-13 and 50-391/87-13, citing activities at WBN which appear to be in violation of NRC regulations. Enclosed is our response to violation 390/87-13-01, 391/87-13-01.

If there are any questions, please telephone C. J. Riedl at (615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. Gridley, Director
Nuclear Licensing and
Regulatory Affairs

Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission

MAR 31 1988

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ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2
REFERENCE: INSPECTION REPORT
NOS. 50-390/87-13 AND 50-391/87-13

This report responds to the notice of violation described in enclosure 1 of the Nuclear Regulatory Commission (NRC) Region II inspection report referenced above.

Violation 390/87-13-01 and 391/87-13-01 (as quoted in the inspection report)

10 CFR 50.55(e)(1)(3) requires that: "The holder of a construction permit shall also submit as specified in paragraph 5.4, a written report on a reportable deficiency (CDR). The report must include a description of the deficiency, an analysis of the safety implications and the corrective action taken, and sufficient information to permit analysis and evaluation of the deficiency and of the corrective action."

Contrary to the above, on August 14, 1987, the NRC inspector identified 10 of the 18 CDRs reviewed as CDRs for which the licensee did not provide adequate analysis and evaluation of the deficiency and the corrective action taken to permit NRC evaluation and closure. The ten CDRs so identified are *390/85-43; *390/85-44; 390/86-29; *390/86-16; 390/86-34; 390/86-43; *390/82-80; 391/83-31; *390/85-55; 390/85-63. Starred (*) items also carry a unit 2 designation.

This is a Severity Level IV Violation (Supplement II) and applies to units 1 and 2.

Admission or Denial of the Alleged Violation

TVA admits the violation occurred.

Reasons for the Violation

Six of the ten reports cited were found to clearly lack the required information:

1. Five of these were inadequate because they were written only to document the fact that TVA had reviewed the deficiencies and no longer considered the problems to represent a safety concern. They did not adequately describe the bases for drawing these conclusions, or, as in three of the cases, did not have a clear-cut basis.

   Three of the reports (concerning cable installation issues) had been downgraded to nonreportable under 10 CFR 50.55(e) on the basis of a long history of cable reliability using maintenance data from five plants with installation practices similar to those employed at WBN. These reports should have been revised as a result of questions raised by employee concern investigations and NRC requests for information. However, the issues were being tracked elsewhere, and there was no information invalidating the previous conclusions, so the reports were left unchanged.

The other two reports which were downgraded did not describe the reviews performed or the basis for the conclusions that safe operation was not affected. These reports merely stated that because there was no adverse affect on safe operation, these items were no longer considered reportable.

All five of the reports which were downgraded to nonreportable were examples of an outdated methodology used within TVA. At the time these reports were submitted, TVA took the position that when a deficiency was determined to be nonreportable, it was unnecessary to provide any information under 10 CFR 50.55(e). (TVA now requires submittal of a final report including justification for considering the item nonreportable any time a written report on the deficiency has been submitted to NRC.)

2. The sixth report was lacking because it did not adequately address differences between the interim and final reports. It was an example of an oversight which resulted in a failure to adequately update information previously provided to NRC.

The remaining four reports do not represent inadequate reports but identify a miscommunication regarding CDR status. Based on discussion with the inspector during his inspection, it appears that he interpreted our submittal of final reports as notification that the item was ready for review and potential closure. Apparently, the inspector understood that these CDRs were ready for closure.

It is TVA methodology to issue a final report when a final corrective action plan has been developed, not necessarily implemented. This report includes the complete description of the deficiency, the safety implications, and the corrective action plan. This is done in a fashion similar to that required for violation responses in accordance with 10 CFR 2.201. While NRC may inspect at any time and may even close the CDR based on appropriate progress and direction, TVA does not request closure until necessary actions are complete and verified, and a closure package with appropriate documentation is prepared and provided to the Watts Bar NRC resident inspector. As the required corrective action was not complete for these CDRs, TVA had not developed closure packages or requested closure of these items.

Although it is not considered the main cause of the deficiency, a contributing factor was the lack of a corporate procedure to govern 10 CFR 50.55(e) reporting and to specify the depth of information to be provided in reports.

Corrective Steps Which Have Been Taken and Results Achieved

1. TVA top management is now involved in the approval of each 10 CFR 50.55(e) report submitted to NRC. Approval by the Site Director and the Director of Nuclear Licensing and Regulatory Affairs is specified in Program Management Procedure (PMP) 0600.03. Additionally, each line manager who reports directly to the site director and who has responsibility for the report content is required to review the NRC submittal before release. TVA believes these added levels of review have enhanced the quality of submittals under 10 CFR 50.55(e).

2. PMP 0600.03, "Evaluation and Reporting of Construction and Design Deficiencies," was issued on February 12, 1987. This procedure provides instructions for the evaluation and reporting of significant conditions adverse to quality and establishes the required content of reports submitted under 10 CFR 50.55(e).

3. PMP 0605.01, "Commitment Management and Tracking," was issued on January 13, 1987. This procedure reflects TVA's policy to manage commitments made to NRC as stated in volume 1 of TVA's Nuclear Performance Plan and describes the Corporate Commitment Tracking System (CCTS), a data base which is used to track TVA commitments made to NRC.

   An integral part of the commitment management methodology, as described in PMP 0605.01, is verification of completed actions. Upon completion of committed actions by the assigned implementing organization, appropriate documentation is compiled to verify completion of the action. When all documentation is assembled, it is put into a closure package and provided to the NRC resident inspector for closure of the CDR.

4. The attachment addresses actions to resolve concerns with specific CDRs cited in the violation.

Corrective Steps Which Will Be Taken to Avoid Further Violations (or Findings)

1. TVA will perform a review of all currently open CDRs for which a final report has been submitted to NRC to ensure past reports contain information required by 10 CFR 50.55(e). If any are determined to be inadequate, a revised report will be submitted to NRC.

2. Site Director Procedure (SDP) AI-1.20, "Commitment Management (Verification Process)," will be issued to further define and govern the closure process onsite.

3. SDP AI-2.8.6, "Corrective Deficiency Reporting," will be issued to further delineate requirements for report input as required in PMP 0600.03.

Date When Full Compliance Will Be Achieved

1. Reports which are currently being submitted to NRC are in full compliance with 10 CFR 50.55(e).

2. Schedules for providing closure packages will be established and discussed with the NRC resident inspector periodically.

3. All open CDRs will be reviewed for adequacy, and a schedule for any necessary report revisions will be provided to NRC by July 5, 1988.

4. SDP AI-1.20 and any necessary implementing procedures will be issued by August 1, 1988.

5. SDP AI-2.8.6 and any necessary implementing procedures will be issued by August 15, 1988.

ATTACHMENT

The following four CDRs are those identified above which identify a miscommunication regarding CDR status. TVA has reviewed the reports and considers them adequate in that they address root cause, safety implications, a corrective action plan, and action required to prevent recurrence. No additional action is necessary for these four reports.

1. CDR 390/85-43, 391/85-42 regarding questionable compression fittings on instrument tubing (NCR WBN 6278).

   The concern was that the final report did not address the root cause of the deficiency and did not address the effects of overtightening compression fittings. During the inspection, questions arose involving the methods employed in the training of craft personnel with regard to compression fittings and quality control (QC) surveillance practices.

   In our final report to NRC dated July 30, 1986, under Description of Deficiency, it is stated that, "These installation problems are attributed to inadequate or nonexistent site procedures and inadequately trained construction craftsmen. This resulted from inadequate specification of requirements." This statement provides adequate root cause for deficient installation of compression fittings used for instrument-related ASME Section III tubing connections on various systems throughout the plant. The root cause involving the installation of Parker-CPI tube end reducers with Imperial-Eastman "High-Seal" nuts and ferrules as a means of connecting tubing to instrument panel isolation valves is also addressed under Description of Deficiency as follows: "The cause of this particular condition was determined to be an error in TVA drawings which allowed the use of either Parker or Imperial-Eastman tube end reducers."

   As stated in the inspection report, TVA was able to provide evidence during the inspection that the design of the compression fitting in use was not subject to overtightening, which can cause a reduction in tube wall thickness for some compression fitting applications.

   The concerns involving craft training and QC surveillance practices are outside the scope of the CDR. TVA will, however, ensure that these are addressed in the TVA-prepared closure package for this item.

2. CDR 390/86-29 regarding discrepancies identified during the walkdown of instrument lines (NCR W-334-P).

   In closing out the issue, TVA's final report to NRC stated that there is a high confidence level that the instrument lines will perform their function provided the attachment clamps and their bolts are properly installed. The concern was that there was no data to indicate that the attachment clamps and bolts are properly installed. In the final report, TVA committed to reinspect the instrument lines to ensure the attachment clamps and bolts are properly installed.

As indicated in our final report, a walkdown will be performed on all instrument lines to document the proper use and installation of attachment clamps and their associated bolts before fuel load.

3. CDR 390/82-83*, 391/82-79 regarding qualification of embedment plates (NCR WB-M-2-06).

   *The inspection report listed 390/82-80 instead of 390/82-83. CDR 390/82-80 does not involve embedment plates. This was discussed with WBN resident inspector G. A. Walton.

   No specific concerns were identified in the inspection report, and our review identified no problem with the report.

4. CDR 391/83-31 regarding reactor trip breaker design (NCR WBN NEB 8305).

   No specific concerns were identified in the inspection report, and our review identified no problem with the report.

The following two CDRs are those which involve cable bend radius deficiencies. In our November 4, 1987 submittal for WBRD-50-390/82-80 and WBRD-50-391/82-76, "Schedule for Revised Final Report," TVA requested that CDRs 390/85-44, 391/85-43, and 390/85-63, 391/85-59 be closed and that the overall cable bend radius issue be tracked and resolved under 390/82-80, 391/82-76.

5. CDR 390/85-44, 391/85-43 regarding minimum cable bend radius deficiencies (NCRs WBN 6295 and W-290-P).

   This concern involved the interim report dated October 24, 1985, which indicated that TVA had contracted with Wyle Laboratory to test cables of the affected type bend to a 1/4-inch radius or less. The inspector's concern was that the file did not contain support data to qualify cable to the 1/4-inch bend radius.

   Between our interim report for NCR WBN 6295 dated October 24, 1985, and the final report for NCRs WBN 6295 and W-290-P dated February 7, 1986, the decision was made to forego the testing at Wyle Laboratory. This decision was not addressed in the final report. TVA's current methodology is to either carry forward commitments made in interim reports to the final report or explain in the final report why commitments made in interim reports were changed. To formalize this policy, this will be included as a requirement in SDP AI-2.8.6, "Construction Deficiency Reporting," which will be issued by August 15, 1988.

6. CDR 390/85-63, 391/85-59 regarding failure to inspect and install cables for proper bend radius (NCR W-290-P).

   No specific concerns were identified in the inspection report and since TVA requested closure of this item and tracking under the overall program, no additional action is considered necessary.

TVA has determined that the following four CDRs require a revised report.

7. CDR 390/86-16, 391/86-34 regarding extreme wear on Westinghouse switchgear breakers (NCR W-318-P).

   The inspection report stated that the interim ". . . report indicates the use of Molykote BR-2 is deferred because of its nonflow characteristic." The final report to NRC stated that the Molykote BR-2 lubricant is adequate with routine maintenance and that replacement of the lever would be done during normal maintenance or on an as-needed basis. The report also indicated that 4 of 29 class 1E breakers have had the levers replaced. The inspector's concern was that supporting data for the change in use of the Molykote BR-2 Plus lubricant was not provided. The inspector identified another concern that there was no criteria for replacing levers.

   A revised final report will be submitted on or about June 1, 1988, addressing the inspector's concern with breaker lubricant.

   Regarding the criteria for lever replacement, the following statement is made in the final report for this item: "The wear limit on existing worn cutoff switch levers is defined as the point at which the thinnest portion of the cresent-shaped worn spot is 50 percent of the original lever thickness." This criteria is also included in Maintenance Instruction MI-57.2.

8. CDR 390/86-34 regarding questionable qualification of installed type N Raychem material (NCR WBN 6623).

   No specific concerns were included in the inspection report. However, based on TVA's review, the report did not provide adequate basis for downgrading the CDR to nonreportable. A revised report will be submitted to NRC on or about July 21, 1988.

9. CDR 390/86-43 regarding crazing of conax electrical penetration sealant (NCR W-356-P).

   No specific concerns were included in the inspection report. However, based on TVA's review, the report did not provide adequate basis for downgrading the CDR to nonreportable. A revised report will be submitted to NRC on or about July 21, 1988.

10. CDR 390/85-55, 391/85-52 regarding excessive conduit bends (NCR WBN 6347).

    The inspection report indicated that it is not evident that TVA has performed a safety evaluation of the various failed cables and the impact of these failures on plant safety.

    A revised report will be submitted to NRC addressing this concern on or about June 22, 1988.