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SUBJECT: Revised Part 21 & final deficiency rept re failure to adequately disposition reportable nonconformances in divs of nuclear engineering & const. Initially reported on 860224 & 28. Reassignment of responsibility status action noted.

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APR 30 1987

BLRD-50-438/86-06
BLRD-50-439/86-05

10 CFR 50.55(e)

U.S. Nuclear Regulatory Commission
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Gentlemen:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - FAILURE TO ADEQUATELY DISPOSITION
REPORTABLE NONCONFORMANCES IN THE DIVISIONS OF NUCLEAR ENGINEERING AND NUCLEAR
CONSTRUCTION - BLRD-50-438/86-06 AND BLRD-50-439/86-05 - REVISED FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Art Johnson on February 24 and February 28, 1986, in accordance with 10 CFR 50.55(e) as SCRs BLN 4703 and BLN CEB 8604, 8605, and 8606, respectively. Our first interim report was submitted on April 3, 1986. Related SCR GEN NEB 8603 was also determined to be reportable under 10 CFR 50.55(e). Our final report was submitted on October 6, 1986. Enclosed is our revised final report. This revision is to document reassignment of responsibility and status of the corrective action. This revision was discussed with NRC Inspector Art Johnson on March 30, 1987. We consider 10 CFR 21 to be applicable to SCR BLN CEB 8604.

If there are any questions, please get in touch with D. L. Terrill at (205) 574-8820.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Homer
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Nuclear Safety and Licensing

Enclosure
cc: See page 2

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APR 30 1987

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ENCLOSURE
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
FAILURE TO ADEQUATELY DISPOSITION REPORTABLE NONCONFORMANCES
IN THE DIVISIONS OF NUCLEAR ENGINEERING AND NUCLEAR CONSTRUCTION
BLRD-50-438/86-06 AND BLRD-50-439/86-05
10 CFR 50.55(e)
SCR GEN NEB 8603, SCR BLN 4703 AND SCR BLN CEB 8604, 8605, AND 8606
REVISED FINAL REPORT

Description of Deficiency

In performing independent ("peer") reviews of 10 CFR 50.55(e) reportable nonconformance reports/significant condition reports (NCRs/SCRs), which were believed to be completed and ready for NRC closure, approximately 50 percent (18 of 34) of the items were found to be incomplete for a variety of reasons, including inadequate implementation of corrective actions; incomplete, inadequate, or nonexistent review for generic implications; and inadequate specification of corrective action and action required to prevent recurrence. Major concerns (although all not safety related) were found for 12 of the incomplete items as listed in table 1.

The cause of this deficiency is believed to result from (1) failure of TVA engineers to take a broad scope view of problems and potential problem areas in problem identification, investigation, and resolution; (2) deficiencies in the method of control and tracking of generic implications reviews within TVA (i.e., failure of the system to ensure the reviews are completed and documented and to document reasoning when "no generic review is required"); and (3) isolated failures of TVA engineers to ensure completion of all activities required to complete an item and/or maintain acceptable configuration control over completed items.

This condition was evaluated for the Watts Bar Nuclear Plant (WBN) and it was determined that corrective action specific to WBN was not required. The reasoning behind this determination is given in the letter from R. L. Gridley to J. Nelson Grace dated June 27, 1986.

Specific corrective actions on the Browns Ferry and Sequoyah Nuclear Plants are not required as a result of this deficiency. These two plants now have major efforts underway to correct deficiencies wherein the final configuration does not match the design. Whether their problems were caused by inadequate implementation of corrective actions or other reasons, they will be adequately handled under their specific design baseline/configuration control programs. Corrective actions for other generic/programmatic concerns in areas such as corrective actions, generic reviews, training, etc., are given below.

Safety Implications

Failure to fully complete corrective actions, identify proper corrective actions and actions required to prevent recurrence, or perform adequate review for generic implications may result in a degraded or nonconservative condition remaining uncorrected. As a result, the safe operations of the plant might be jeopardized.

Corrective Action

TVA will ensure completion of the specific concerns and/or activities identified as incomplete in the Bellefonte peer review noted above. These items will be completed and reverified before being presented to the NRC Resident Inspector for closure.

The Bellefonte Site Director has issued a requirement for peer review of 50.55(e) items, violation responses, and other responses to NRC that contain significant corrective actions. This procedure has been implemented in the Bellefonte Project Manual as BLEP-14. It will ensure that final configurations and documentation meet commitments made in those responses and will emphasize consideration of aspects of a deficiency outside of those identified on the item being dispositioned. This increased attention to corrective actions will result in better and more complete reviews and actions on the part of the individuals involved due to increased knowledge of requirements and awareness that their work is being thoroughly reviewed after-the-fact for acceptability.

In addition, TVA has a number of efforts underway to improve the corrective action process and configuration control. These efforts are being led by the Division of Nuclear Quality Assurance (DNQA), the Division of Nuclear Services (DNS) and the DNE Engineering Assurance organization (EA). These activities will also serve to prevent recurrence of this problem. The following programmatic changes are underway by DNQA, DNS, and EA:

DNQA has developed a standardized corrective action program and its implementation should enhance the overall effectiveness of the handling of CAQs. The program upgrades the areas of generic reviews, interface controls, tracking, trending, and corrective action verification. In particular, the centralized generic reviews should ensure identified deviations receive a consistent and timely review for generic implications. The generic reviews are tracked and status reported to upper management. Additionally, the increased management attention in the corrective action process should raise the confidence level that required actions have been completely and effectively implemented.

DNS has a major effort underway to improve configuration control at all TVA nuclear plants. Some 21 areas of configuration control have been surveyed (with INPO involvement). Detailed actions are being developed into a TVA corporate plan on configuration management.

To strengthen the corrective action program for CAQs in DNE, numerous changes and revisions have been implemented by EA within the DNE Procedures Manual. These changes, coupled with enhanced management awareness and attention, are intended to ensure the complete resolution of all steps involving CAQs within the corrective action process. Specifically:

1. Training - NEP-1.2 contains requirements for training of employees and management commensurate with levels of responsibilities and task assignment. DNE personnel have received instructions on NEP-9.1, Revision 0, "Corrective Action" and NQAM, Part I, Section 2.16, "Corrective Action," which forms the basis for NEP-9.1, revision 1. Additionally, the Engineering Assurance Training Section has developed a training course on the CAQ/corrective action program in NEP-9.1, revision 1, as part of its course offerings. This training will be provided to applicable DNE personnel by May 31, 1987.
2. Generic Implications - DNE CAQs processed beyond the immediate supervisor, under NEP-9.1, revision 1, will be reviewed by the responsible organization to determine if a generic review is required. Justification is required for a negative determination. If a generic review is required, the DNE CAQ is delivered to EA who determines which organizations, if any, should perform generic investigation(s). Although responsibility for conduct of generic investigations will remain with the assigned organization, CAQs will be given close scrutiny by EA and receipt of all responses to any generic evaluation will be a prerequisite to CAQ closure. Long-range planning by EA for the corrective action program includes the staffing of the Problem Report Section of the Problem Report and Trending Group. This section will be responsible for implementing and coordinating the DNE corrective action program by ensuring that all potentially generic CAQs are evaluated and investigated by affected organizations. This organization will ensure centralization and control of generic investigations within DNE and eliminate the concerns relative to the failure to conduct generic evaluations.
3. Corrective/Preventive Action - Existing practices and policies for the implementation of corrective and preventive actions, to include the determination and documentation of root causes, are considered adequate. NEP-9.1, revision 1, now requires completion of physical plant work as a condition for CAQ closure. Supplemented by the tracking of CAQs in the Tracking and Reporting of Open Items (TROI) system, more emphasis will be placed on those elements that ensure a closed loop system. Additionally, the Engineering Assurance internal auditing program will audit projects and branches for compliance with NEP-9.1, as appropriate.

All of the above procedural changes by DNQA and DNE have been implemented. Necessary training has been performed and additional training in DNE in the CAQ process will be given by May 31, 1987. Audits will be performed as deemed necessary and/or as required by procedures. TVA's corporate plan for configuration management will be developed by DNS by June 30, 1987. The above programmatic changes and their implementation will prevent recurrence of this condition.

TABLE 1

MAJOR CONCERNS FROM BELLEFONTE PEER REVIEW

<u>NCR/SCR NO.</u>	<u>MISSING ELEMENT</u>
BLN 2318 & 2917	Clamp tightening procedures and generic review
BLN 2393	Corrective action changed, but report was not changed
BLN 2661	Generic review incomplete
BLN BLP 8121	Adequate design criteria revision and generic review
BLN BLP 8224	Corrective action inadequate
BLN NEB 8007	B&W to revise specifications
BLN QAB 8102	Documentation of required approval of ECN not complete
BLN CEB 79-07	Work not done although reported complete
BLN 1885	Future problems not considered
BLN 2383 & 2494	Corrective action not accomplished as committed. Some reinspection not done.
BLN BLP 8133	Error in final report and minor documentation mistake on commitment tracking record completion
BN-C-82-04 (Def. No. 2)	Program to show acceptability of miscellaneous steel not established as committed