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RECIP.NAME RECIPIENT AFFILIATION
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SUBJECT: Advises NRC of changes in plant DCRDR program,consistent w/ completion of safety-related portions of NUREG-0737, Item I.D.1.Util withdrawing commitment to implement non-safety significant HEDs.

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

Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
		50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2, AND 3 - OPERATING & MAINTENANCE (O&M) COST REDUCTION PROGRAM - COST BENEFICIAL LICENSING ACTION - REVISION OF DETAILED CONTROL ROOM DESIGN REVIEW (DCRDR) PROGRAM TO DISCONTINUE COST-BENEFIT ANALYSIS OF NON-SAFETY SIGNIFICANT HUMAN ENGINEERING DISCREPANCIES (HEDs)

This letter is to advise NRC of changes in the BFN DCRDR program, consistent with the completion of the safety-related portions of NUREG-0737, Item I.D.1. Because TVA considers that the design of the Unit 2 Control Room is adequate and the safety-related objectives of the DCRDR program have been met, we are revising the DCRDR program and do not plan to complete the cost/benefit analyses of the non-safety HEDs. We identified these changes as part of our O&M cost reduction efforts.

In response to Generic Letter 82-33 (Reference 1) and NUREG-0737 (TMI Action Plan), Supplement 1, Item I.D.1, Detailed Control Room Design Review, TVA reviewed the BFN control rooms and identified numerous HEDs. In accordance with the TMI Action Item, TVA classified these HEDs as either safety significant or non-safety significant (References 2 and 3). TVA committed to implement the safety significant HEDs, and, although not required by the TMI Action Item, TVA also committed to implement those non-safety significant HEDs that had a positive cost/benefit ratio (References 4 and 5). As noted above, as part of its comprehensive program to reduce O&M costs at BFN, TVA has reevaluated its commitment to implement the non-safety significant HEDs. As a result of this evaluation, TVA is withdrawing this commitment.

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In the NRC Staff's Safety Evaluation Report on BFN's DCRDR program (Reference 6), NRC stated that the DCRDR program at BFN "meets all the requirements established by Supplement 1 of NUREG-0737," and concludes that this TMI Action Item would be closed upon completion and implementation of the safety significant HEDs. Subsequently, during the Unit 2, Cycle 6 refueling outage, TVA completed an upgrade of the Unit 2 control room. In Reference 7, TVA summarized the corrective actions that were implemented during this upgrade to resolve the safety significant HEDs. No safety significant HEDs were reclassified to a non-safety significant status. Therefore, withdrawal of TVA's commitment associated with non-safety significant HEDs does not affect closure of the TMI Action Item.

On July 14, 1993, TVA met with NRC to discuss BFN's program for preparation of cost beneficial licensing actions (CBLAs). At that meeting, Mr. L. B. Marsh of NRC indicated that TVA should avoid submitting CBLAs for which no NRC licensing action is requested. However, during subsequent discussions the NRC Project Manager indicated that this is a special case because there is an open commitment on the docket to resolve non-safety significant HEDs. Therefore, TVA is submitting this letter as a docket clarification but does not request explicit NRC approval. The enclosure to this letter provides the background of this issue, the requested NRC licensing action (in this case, no NRC action is necessary), and the justification for withdrawing the commitment.

There are no commitments contained in this letter. If there are any questions, please telephone me at (205) 729-2636.

Sincerely,

Pedro Salas
Manager of Site Licensing
cc: See page 4

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References:

1) NRC letter to All Licensees of Operating Reactors, Applicants for Operating Licenses, and Holders of Construction Permits, dated December 17, 1982, Supplement 1 to NUREG-0737 - Requirements for Emergency Response Capability (Generic Letter No. 82-33)

2) TVA letter to NRC, dated December 30, 1986, Detailed Control Room Design Review (DCRDR) - NUREG-0737, Item I.D.1

3) TVA letter to NRC, dated November 9, 1988, Response to NRC Safety Evaluation for the BFN Detailed Control Room Design Review (DCRDR)

4) TVA letter to NRC, dated December 28, 1989, Browns Ferry Nuclear Performance Plan, Attachment IV-4, Response to Request for Additional Information

5) TVA letter to NRC, dated August 22, 1991, Supplemental Response to NRC Safety Evaluation for the BFN Detailed Control Room Design Review (DCRDR)

6) NRC letter to TVA, dated October 29, 1991, Safety Evaluation of the Browns Ferry Nuclear Plant Detailed Control Room Design Review

7) TVA letter to NRC, dated June 14, 1993, Completion of NUREG-0737 (TMI Action Plan), Item I.D.1, Control Room Design Reviews (CRDR) for Unit 2

DEC 15 1993

cc (Enclosure):
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ENCLOSURE

Tennessee Valley Authority (TVA)
Browns Ferry Nuclear Plant (BFN)
Operating & Maintenance Cost Reduction Program

COST BENEFICIAL LICENSING ACTION
RLA-05: REVISION OF DETAILED CONTROL ROOM DESIGN REVIEW (DCRDR) PROGRAM TO DISCONTINUE COST-BENEFIT ANALYSIS OF NON-SAFETY SIGNIFICANT HUMAN ENGINEERING DISCREPANCIES (HEDs)

I. SUMMARY OF RLA-05

As part of its Operating & Maintenance Cost Reduction Program, TVA is withdrawing the commitment to complete the cost/benefit analysis of the non-safety significant Human Engineering Discrepancies (HEDs) identified by the DCRDR program. TVA considers the design of the Unit 2 control room to be adequate and the objective and the requirements of the Control Room Design Review program have been met.

The withdrawal of this commitment on Unit 2 results in an estimated savings of $180,000 to TVA. TVA will realize additional cost savings on Units 1 and 3, since TVA will not review and disposition these HEDs as part of the unit recovery efforts.

II. BACKGROUND

In response to Generic Letter 82-33 (Reference 1), which transmitted Supplement 1 to NUREG-0737 (TMI Action Plan), TVA developed a DCRDR program. The objective of the program (from NUREG-0660, Item I.D.1) was to "improve the ability of nuclear power plant control room operators to prevent accidents or cope with accidents if they occur by improving the information provided to them". A summary report, which detailed the BFN program, methodology, assessment process, results, and proposed corrective actions, was provided to NRC in Reference 2. Additional corrective actions were specified in Reference 3.

As part of this program, operations and human factors specialists assessed the Units 1, 2, and 3 control rooms and identified numerous HEDs. Based on the guidance of NUREG-0700 (Guidelines for Control Room Design Reviews) and NUREG-0737, Supplement 1, the potential for operator errors and the consequence of those errors were systematically considered. Both the individual and aggregate effects of HEDs were considered. These HEDs were classified into two categories: safety significant and non-safety significant. Safety significant HEDs included two subcategories:

> Category 1 - Errors resulting from these HEDs directly challenge or cause a loss of a critical safety function, or
>
> Category 2 - Errors resulting from these HEDs reduce or cause the loss of resources needed to maintain a critical safety function.

Non-safety significant HEDs also included two subcategories:

> Category 3 - Errors resulting from these HEDs adversely affect normal operation or have the potential to affect critical safety function resources, or
>
> Category 4 - Errors resulting from HEDs in this category have no significant affect on plant operations.

The DCRDR assessment process, including the categorization and the evaluation of cumulative effects, was determined by the staff to be acceptable (Reference 4).

TVA provided the current schedule for implementation of the Unit 2 DCRDR corrective actions in Reference 5. In that letter, TVA committed to complete all HEDs which met the Browns Ferry Nuclear Performance Plan restart criteria prior to start-up from the Unit 2 Cycle 5 outage. All safety significant HEDs were to be completed prior to start-up from the Unit 2 Cycle 6 outage. Non-safety significant HEDs were to be implemented prior to restart from the Unit 2, Cycle 7 refueling outage, only if they were determined to have a positive cost/benefit ratio. In Reference 6, TVA committed to complete all safety significant and positive cost/benefit non-safety significant HEDs for Units 1 and 3 prior to the restart of each unit. The final Safety Evaluation Report (SER) for the BFN DCRDR program was provided in Reference 7.

As committed, TVA performed an extensive upgrade of the Unit 2 control room during the Cycle 6 outage. The direct cost of these upgrades was approximately 16 million dollars. Indirect costs, such as retraining the operators, procedural upgrades, and updating drawings and other documentation, were not included. In addition, TVA installed a full functioned Safety Parameter Display System (SPDS) in the control room and upgraded the control room furniture. TVA notified NRC of the completion of the safety significant portion of the Unit 2 DCRDR program in Reference 8. No safety significant HEDs were reclassified to a non-safety significant status.

III. REQUESTED NRC LICENSING ACTION

The withdrawal of this commitment does not require explicit NRC review and approval. TVA had previously verbally agreed to submit only those cost beneficial licensing actions which required NRC action to implement. However, submittal of this cost beneficial licensing actions is necessary in order to close TVA's previously docketed commitment to resolve non-safety significant HEDs.

IV. BASIS FOR REQUESTING NO NRC LICENSING ACTION

Section 3.6 of the NRC's Safety Evaluation Report on the BFN DCRDR program (Reference 7) concluded that this TMI Action Plan Item would be closed based on the correction of the safety significant HEDs. TVA notified NRC of the completion of the DCRDR program on Unit 2 (Reference 8) based on the correction of these safety significant HEDs. The withdrawal of this commitment does not affect the conclusions reached in the NRC's Safety Evaluation nor the closure of the TMI Action Plan Item. Therefore, withdrawal of this commitment does not require explicit NRC review and approval.

V. JUSTIFICATION FOR THE CHANGE

A. RLA-05 Is Safety Neutral

Safety significant HEDs are defined as those configurations that could result in errors that could directly challenge or cause a loss of a critical safety function, or reduce or cause the loss of resources needed to maintain a critical safety function. Non-safety significant HEDs are defined as those configurations that could result in errors that could adversely affect normal operation, have the potential to affect critical safety function resources, or have no significant affect on plant operations.

Completing the evaluation of non-safety significant HEDs is not required for safe operation of the plant. Dispositioning non-safety significant HEDs does not affect the operators' ability to cope with transient or accident conditions. In addition, the plant operators are thoroughly trained and have demonstrated during emergency drills that they can effectively cope with emergencies without the disposition of the non-safety significant HEDs. Therefore, plant operation without further action to disposition the non-safety significant HEDs does not pose an undue risk to public health and safety or the safe operation of the plant.

B. RLA-05 Provides Significant Cost Savings and Other Benefits

Dispositioning the non-safety significant HEDs would be particularly burdensome to TVA. There are 201 non-safety significant HEDs requiring disposition for Unit 2. The cost associated with researching each individual HED to determine if it has been previously resolved, developing any conceptual corrective actions, performing a cost/benefit analysis, implementing any changes, documenting the disposition of each HED, performing independent review and audits of the closure packages, and providing a formal closure submittal to NRC is approximately $180,000. This estimate does not include the cost of implementing any modifications. Additional costs would be incurred for the review and disposition of these HEDs as part of the recovery efforts for Units 1 and 3. These costs outweigh the potential benefits that might be derived from further evaluation of the non-safety significant HEDs.

In addition, the full time dedication of one Reactor Operator, one Senior Reactor Operator, and the engineering resources for the review and disposition of these non-safety significant HEDs is not the most productive use of these individuals.

VI. CONCLUSION

TVA considers the design of the Unit 2 control room to be adequate and the objective of the DCRDR program has been met. That is, TVA has improved the ability of nuclear power plant control room operators to cope with abnormal or emergency conditions by improving the control room.

The withdrawal of TVA's commitment to complete the cost/benefit analysis of the non-safety significant HEDs identified as part of the DCRDR program would significantly reduce the burden on TVA resources, without posing an undue risk to public health and safety or the safe operation of the plant.

TVA has determined that RLA-05 is a cost beneficial licensing action since it is safety neutral and provides significant cost savings. Therefore, TVA is withdrawing its commitment to complete the cost/benefit analysis of the non-safety significant HEDs identified as part of the DCRDR program. The withdrawal of this commitment does not affect the conclusions reached in the NRC's Safety Evaluation or the closure of the original TMI Action Plan Item.

VII. REFERENCES

1) NRC letter to All Licensees of Operating Reactors, Applicants for Operating Licenses, and Holders of Construction Permits, dated December 17, 1982, Supplement 1 to NUREG-0737 - Requirements for Emergency Response Capability (Generic Letter No. 82-33)

2) TVA letter to NRC, dated December 30, 1986, Detailed Control Room Design Review (DCRDR) - NUREG-0737, Item I.D.1

3) TVA letter to NRC, dated November 9, 1988, Response to NRC Safety Evaluation for the BFN Detailed Control Room Design Review (DCRDR)

4) NRC letter to TVA, dated August 9, 1988, Safety Evaluation for the Detailed Control Room Design, Browns Ferry Nuclear Plant, Units 1, 2 and 3

5) TVA letter to NRC, dated December 28, 1989, Browns Ferry Nuclear Performance Plan, Attachment IV-4, Response to Request for Additional Information

6) TVA letter to NRC, dated August 22, 1991, Supplemental Response to NRC Safety Evaluation for the BFN Detailed Control Room Design Review (DCRDR)

7) NRC letter to TVA, dated October 29, 1991, Safety Evaluation of the Browns Ferry Nuclear Plant Detailed Control Room Design Review

8) TVA letter to NRC, dated June 14, 1993, Completion of NUREG-0737 (TMI Action Plan), Item I.D.1, Control Room Design Reviews (CRDR) for Unit 2