TENNESSEE VALLEY AUTHORITY
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JUN 12 1987

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

Gentlemen:

In the Matter of	)	Docket Nos. 50-327
Tennessee Valley Authority	)	50-328

SEQUOYAH NUCLEAR PLANT (SQN) - NRC-OIE INSPECTION REPORT NOS. 50-327/87-02 AND 50-328/87-02 - RESPONSE TO NOTICE OF VIOLATION NOS. 50-327, -328/87-02-01 AND -02

Enclosed is our response to Gary G. Zech's April 17, 1987 letter to S. A. White which transmitted the subject Notice of Violation.

Enclosure 1 provides our response to the Notice of Violation. Enclosure 2 contains a list of commitments contained in enclosure 1. We do not recognize any other items described herein as commitments.

An extension of the response date to May 29, 1987, was discussed between R. E. Carroll and G. B. Kirk on May 19, 1987. The subsequent additional delay was discussed between F. M. McCoy and M. R. Harding on May 29, 1987. If you have any questions, please call M. R. Harding at 615/870-6422.

To the best of my knowledge, I declare the statements contained herein are complete and true.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Domer

J. A. Domer, Assistant Director
Nuclear Safety and Licensing

Enclosures
cc: see page 2

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U.S. Nuclear Regulatory Commission

JUN 12 1987

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ENCLOSURE 1
RESPONSE - NRC-OIE INSPECTION REPORT
NOS. 50-327, -328/87-02
GARY G. ZECH'S LETTER TO S. A. WHITE
DATED APRIL 17, 1987

Violation 50-327 -328/87-02-02

Technical Specification 6.8.1 requires that written procedures be established, implemented, and maintained covering safety-related activities stated in Appendix A of Regulatory Guide 1.33, Revision 2, including surveillance and test activities of safety-related systems.

Example 1.a

Instrument Maintenance Instruction (IMI)-99, Response Test (RT) 106A.2, states that the technician is required to have the operator place the appropriate reactor protection system channel block switch in the "block" position prior to inserting test leads.

Contrary to the above, the technician did not implement the requirements of RT-106A.2 in that he failed to have the appropriate reactor protection system channel block switch in the "block" position prior to inserting test leads. As a result, a containment ventilation isolation (engineered safety feature actuation) occurred when test leads were inserted.

Response to Example 1.a

1. Admission Or Denial Of The Alleged Violation

   TVA concurs the violation occurred as stated.

2. Reason For The Violation

   The cause of this example was a personnel error by the instrument mechanic who failed to follow the procedural instructions in RT-106A.2.

3. Corrective Steps Taken And Results Achieved

   Appropriate disciplinary action was taken against the involved individual.

4. Corrective Steps To Be Taken To Avoid Further Violations

   Training is currently being conducted on procedural compliance philosophy. This training is being provided to those individuals who either perform surveillance instructions (SIs) or review the data collected. This training emphasizes the individual's responsibilities and expectations involving compliance with procedures and includes a test along with a signed acknowledgment by the attendees that they understand their responsibilities with respect to procedural compliance. At this time, training has been provided to approximately 800 individuals. This training will be completed before restart of the unit for which the SIs are required.

5. Date When Full Compliance Will Be Achieved

Full compliance has been achieved with respect to this example.

Additional information concerning this example is contained in Licensee Event Report (LER) 50-328/86-008 dated December 24, 1986.

Example 1.b

Work plan 12268 included a functional test which was intended to test the operability of switch 2-HS-31A-7A.

Contrary to the above, the functional test in work plan 12268 was inadequate in that it did not include the appropriate lifted leads. When the functional test was performed, it initiated an inadvertent control room isolation (engineered safety feature actuation).

Response to Example 1.b

1. Admission Or Denial Of The Alleged Violation

TVA concurs the violation occurred in that the workplan instructions did not adequately address the potential for initiating a control room isolation, even though the instructions were adequate for functionally testing the operability of the switches.

2. Reason For The Violation

The violation occurred as the result of personnel errors during the preparation of the workplan. Systems Engineering personnel failed to identify a second set of contacts when reviewing the schematic diagrams and contact development drawings in the preparation of the workplan.

3. Corrective Steps Taken And Results Achieved

a. After the inadvertent control room isolation occurred, the involved workplan was reviewed for similar deficiencies involving testing of other switches. The workplan was appropriately revised on December 2, 1986, and subsequent testing was completed without additional control room isolations. The initiation of a control room isolation from workplan 12268 was an isolated occurrence because the workplan was a one-time retest of "W-2" switches.

b. Systems engineers have been counseled to ensure that instructions in procedures are accurate and complete when writing or reviewing procedures as independent reviewers.

4. Corrective Steps To Be Taken To Avoid Further Violations

No further corrective action is required.

5. Date When Full Compliance Will Be Achieved

Full compliance was achieved with respect to this example when the workplan was revised on December 2, 1986.

Additional information concerning this example is contained in LER 50-328/86-009 dated December 24, 1986.

Example 1.c

Instrument Maintenance Instruction (IMI)-99, Response Time (RT)-16.7, was established to functionally test containment pressure channel III.

Contrary to the above, RT-16.7 was inadequate, in that it requires only the train being tested be placed in "test" prior to tripping the high-high containment pressure bistables. As a result, an inadvertent containment phase "B" isolation (engineered safety feature actuation) occurred when the test was performed.

Response to Example 1.c

1. Admission Or Denial Of The Alleged Violation

TVA concurs the violation occurred in that the IMI did not adequately address the potential for a containment phase "B" isolation, even though the instruction was adequate for determining the involved response time.

2. Reason For The Violation

This example was a result of an inadequate review of a proposed procedure revision. The proposed procedure revision, when approved, deleted the requirement to place both trains of the solid-state protection system in the "test" position during the performance of the test.

3. Corrective Steps Taken And Results Achieved

The procedure has been revised to eliminate the step sequence that caused a phase "B" isolation.

4. Corrective Steps To Be Taken To Avoid Further Violations

Reviews and audits of SQN SIs have identified technical and administrative weaknesses in these instructions. TVA has undertaken a comprehensive and disciplined program to review and revise these instructions. The basic objectives of the program are to ensure technical specification requirements are addressed and that SIs and their supporting instructions are covered by administrative requirements that

make the performance of the SIs reliable. Additional information on the SQN Surveillance Instruction Review and Revision Program is provided in TVA's March 24, 1987 submittal (R. L. Gridley to S. D. Ebneter).

5. Date When Full Compliance Will Be Achieved

Full compliance was achieved with respect to this example upon issuance of the revised IMI-99, RT-16.7 on April 20, 1987.

Additional information concerning this example is contained in LER 50-328/86-010 dated January 12, 1987.

Example 1.d

General operating instruction GOI-6H, Freeze Protection Checklist, requires the technician to check that all listed circuits are greater than or equal to 75 degrees F and to check thermostats set at 75 degrees F.

Contrary to the above, GOI-6H was performed without verifying the temperatures of circuits as required. In addition, the observed performance did not check all listed thermostats, as required, because they were not found. Finally, circuit thermostats were not set to 75 degrees F per procedure.

Response to Example 1.d

1. Admission Or Denial Of The Alleged Violation

TVA concurs the violation occurred as stated.

2. Reason For The Violation

The violation occurred as a result of an inadequate procedure. The checklist was inconsistent in its requirements and was not specific in the methodology to be used to satisfy the requirements. Specific procedural inadequacies are as follows:

1. The checklist specified the circuit temperatures be verified to be greater than or equal to 75°F; however, no methodology was provided to determine the circuit temperature.

2. The checklist implied the thermostats be set at 75°F. This requirement was inconsistent with the checklist requirement that the circuit temperatures be greater than or equal to 75°F.

3. The checklist was unclear as to the location (or existence) of thermostats for specific circuits.

3. Corrective Steps Taken And Results Achieved

The freeze protection instruction has been reviewed, and a revision has been drafted to correct the identified inadequacies.

4. Corrective Steps To Be Taken To Avoid Further Violations

The draft revision will be subjected to a "walkdown" to ensure that procedural instructions are clear and consistent with the system configuration. The revision to this procedure will be issued before the next performance. The next performance of this procedure is currently scheduled for November 1, 1987.

5. Date When Full Compliance Will Be Achieved

Full compliance with respect to this example will be achieved by November 1, 1987, by issuance of the specified procedure revision.

Violation 50-327, -328/87-02-01

10CFR50 Appendix B, Criterion III, states that design changes including field changes shall be subject to design control measures commensurate with those applied to the original design. Nuclear Engineering Procedure (NEP)-6.1 states that changes to any design documents which deviate from the approved scope of work will be evaluated against the original work scope. The evaluation against the original work scope includes applicable portions of NEP-6.1, Attachment 2.

Field change 4873 deviated from the approved scope of Engineering Change Notice (ECN) L6715, which implemented the original design change request, by addressing the removal of electrical circuits indicated in "hold clouds" from certain drawings. ECN L6715 did not address the existence or removal of these electrical circuits indicated in "hold clouds" on certain drawings.

Contrary to the above, field change 4873 was not reviewed and approved subject to design control measures commensurate with those applied to the original design in that:

a. The design change request that initiated the original engineering change notice was not reviewed during the field change review and approval process.

b. NEP-6.1, Attachment 2 was not used in the field change request review and approval process.

This is a Severity Level V violation (Supplement I).

Admission Or Denial Of The Alleged Violation

TVA denies the violation.

Basis For Denial

TVA has established design control measures by various procedures and instructions including Nuclear Engineer Procedure (NEP)-6.1, "Change Control;" Sequoyah Engineering Project Administrative Instructions, SQEP-AI-11, "Handling of Engineering Change Notices (ECNs);" and SQEP-AI-11A, "Handling of Field Change Requests (FCRs)." Review of a design change request (DCR) that originated an ECN is not a requirement. In this particular case, the cited DCR is a generic DCR which included no specific information relative to the ECN.

Evaluation of the FCR against the original work scope was accomplished by review of the ECN which includes the modification criteria. This modification criteria includes the same information provided in NEP-6.1, attachment 2.

Details

TVA acknowledges a personnel error occurred in that FCR 4873, which addressed the removal of electrical circuits indicated in "hold clouds" from certain drawings, was outside the scope of the involved ECN L6715. Individuals responsible for the review and approval of the FCR were knowledgable of the Engineering Report and the origin/status of the affected circuits. The removed circuits and hold clouds were within the scope of ER for the Significant Condition Report (SCR) upon which the ECN was based.

The ER is included in the ECN package which was reviewed before approval of the FCR. Since the circuits on hold procedurally cannot be field implemented, no modifications were made; and removing the information on hold had no impact on the physical configuration of the plant. Based on the cognizance by the individuals involved of the origin/status of the removed circuits and the lack of safety significance with removing the circuits on "hold" from the drawings, it is TVA's position that the evaluation of the FCR against the original scope was adequately performed.

The subject violation states that "The design change request that initiated the original engineering change notice was not reviewed during the field change review and approval process." SQEP-AI-11A, step 4.3.1, requires, in part, that the responsible engineer review the scope of the ECN. ECN L6715 was reviewed as part of the FCR review and approval process. Review of the DCR is not required in that the scope of the design change is established by the ECN. In this case, the DCR referenced (DCR 2259) is a generic DCR written to "implement corrective actions identified in resolution to problems associated with nonconformance reports as authorized by memorandum from SQN." Thus, review of the DCR would not have provided any additional information not included in the ECN.

The subject violation additionally states "NEP-6.1, Attachment 2 was not used in the field change request review and approval process." Specific use of NEP-6.1, attachment 2, is not a requirement. NEP-6.1, attachment 2, is a checklist of potentially affected design documents to consider when implementing a design change. However, the items included on NEP-6.1, attachment 2, are included in the modification criteria which is included in the ECN package. Review of the NEP-6.1, attachment 2 items is accomplished by the review of the ECN which includes the modification criteria.

Additional Information

TVA is providing the following information for completeness in response to specific statements made in the body of the inspection reports which may be germane to the subject violation.

NRC Statement - page 7, paragraph d

> DCR 2259 was written to change the sequencing time of the containment spray (CS) pumps and other loads when a loss of offsite power is followed by a need to commence containment spray.

Response

DCR 2259 is a generic DCR written to implement corrective actions identified in resolution to problems associated with nonconformance reports, significant conditions, and engineering reports as authorized by memorandum from SQN. The DCR itself is not specific with respect to a particular condition.

NRC Statement - page 8, paragraph 1, item (1), first sentence

> The original DCR was not reviewed during the review and approval process for FCR 4873.

TVA Response

The statement is true; however, review of the original DCR is not required since the ECN establishes the scope of the design change. FCR 4873 was reviewed against ECN L6715 (see details under response to violation 87-01-01).

NRC Statement - page 8, paragraph 1, item (1), second sentence

> Attachment 2, of NEP-6.1, which is used during the initial ECN review and approval process, was not used by either the design engineer or the review engineer to consider whether FCR 4873 affected certain aspects of ECN L6715.

TVA Response

NEP-6.1, attachment 2, is not required to be reviewed during the review and approval process of an FCR. Review of the ECN is required for category A and B FCRs. The ECN includes a design criteria section which addresses the specific items listed on attachment 2, NEP-6.1

NRC Statement - page 8, paragraph 1, item (2)

> It is not a normal practice for DNE engineers to review the affected work plan or other issued FCRs prior to approving a specific FCR.

TVA Response

It is not normal practice for DNE engineers to review the affected workplan, but DNE engineers do review the affected workplan when requested by the Modifications Group. It is normal practice for DNE engineers to review other issued FCRs that are related to the particular ECN. It should be noted that FCR 4873 was the first FCR issued against ECN L6715; therefore, there were no other FCRs to review.

NRC Statement - page 8, paragraph 1, item (3)

> The reviews of WP 12227 and FCR 4873 conducted under AI-19 and SQEP-AI-11A incorrectly determined that FCR 4873 was within the scope of ECN L6715. FCR 4873 addressed the removal of administrative control markings (hold clouds) and electrical circuits within the hold clouds on certain as-constructed electrical drawings. These circuits and hold clouds were addressed by another ECN . . . . The FCR was not reviewed with respect to the ECN for which it really applied . . . .

TVA Response

The subject circuits and hold clouds were not addressed by another ECN. These circuits had already been incorporated into the drafting of the subject drawings based on the engineering report. As a result of changes to the subject engineering report, the final scope of ECN L6715 did not include these circuits, and the drawing was issued for ECN L6715 with administrative "hold clouds" marking these circuits. Thus, although the subject circuits and hold clouds were not within the final scope of ECN L6715, they were associated with the same technical issues and were not addressed by another ECN.

Summary

TVA acknowledges that the design changes made under FCR 4873 were not within the scope of ECN L6715. However, the individuals who reviewed and approved the FCR were cognizant of the origin/status of the involved circuits. Review of the original work scope was accomplished by review of the ECN which included the ER for the SCR. Review of the NEP-6.1, attachment 2 criteria was accomplished by review of the ECN which included the NEP-6.1, attachment 2 criteria in the modifications criteria. Review of the DCR was not required and would have contributed nothing to the FCR evaluation because of its generic nature.

ENCLOSURE 2

List of Commitments

1. Training on procedural compliance philosophy will be provided to those individuals who either perform surveillance instructions (SIs) or review the data collected. This training will be completed before startup of the unit for which the SIs are required.

2. Draft revision to GOI-6H, "Freeze Protection Checklist," will be subjected to a walkdown to ensure that procedural instructions are clear and consistent with the system configuration. The revision to this procedure will be issued before the next performance which is currently scheduled for November 1, 1987.