

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

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June 29, 1984

U.S. Nuclear Regulatory Commission
Region II
ATTN: James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

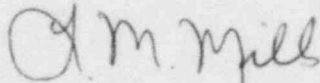
Dear Mr. O'Reilly:

Enclosed is our response to R. C. Lewis' May 23, 1984 letter to H. G. Parris transmitting Inspection Report Nos. 50-259/84-15, -260/84-15, -296/84-15 regarding activities at our Browns Ferry Nuclear Plant which appeared to have been in violation of NRC regulations. We have enclosed our response to the Notice of Violation. On June 22, 1984, Ross Butcher of your staff and Mike Hellums of my staff discussed an extension to June 29, 1984 for submitting this response. If you have any questions, please call Jim Domer at FTS 858-2725.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager
Nuclear Licensing

Enclosure

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PDR ADOCK 05C00259
Q PDR

RESPONSE - NRC INSPECTION REPORT NOS.
50-259/84-15, 50-260/84-15, AND 50-296/84-15
RICHARD C. LEWIS' LETTER TO H. G. PARRIS
DATED MAY 23, 1984

ITEM NO. 1

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documented instructions and procedures. The plant clearance procedure (Standard Practice 14.25) for tagout of equipment specifies requirements to be followed in placing equipment in and out of service.

Contrary to the above, the requirements of Standard Practice 14.25 were not met in that tagout clearance procedures were not followed for removing the tag on a piece of equipment when the equipment was returned to service. On April 5, 1984, a unit 1 core spray valve (FCV-75-9) was noted to have a tag on the valve handwheel. The clearance (83-1260) had been cleared and the system returned to service on August 30, 1983. A similar violation was noted in Report 83-60.

This is a Severity Level IV violation (Supplement I) and applicable to unit 1.

1. Admission or Denial of the Alleged Violation (or Finding)

TVA admits to the violation as stated.

2. Reasons For the Violations (or Finding) if Admitted

Standard Practice 14.25 requires the operator to remove all white clearance tags as a clearance is lifted. This was not done as required by procedure. The red clearance tag was removed, the clearance lifted, and the valve was fully operable. The error was due to personnel error.

3. Corrective Steps Which Have Been Taken and Results Achieved

Standard Practice 14.25 is being revised to require second-party verification in both the hanging and removing of clearance tags. The clearance tag was removed from valve FCV-1-75-9.

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

Implementation of second-party verification requirements and covering the changes in operator supplemental training will avoid further violations.

5. Date When Full Compliance Will Be Achieved

Standard Practice 14.25 will be corrected by July 1, 1984 and operator training will be completed by September 1, 1984.

ITEM NO. 2

Technical Specification 6.3.A.1 requires that detailed written procedures, including applicable checkoff lists, shall be prepared, approved, and adhered to for normal startup, operation, and shutdown of the reactor and of all systems and components involving nuclear safety of the facility.

Contrary to the above, this requirement was not met in that Operating Instructions (OI) 32 and 32A, Control/Station Air and Drywell Control Air, do not contain all system valves in the valve lineup checklists. A random and partial sample of valves in the reactor building identified that nine valves on unit 1 were not on any checklist (32-1421, 32-1422, 32-1423, 32-1424, 32-1425, 32-1228, 32-2145, 32-1336, 32-1255). These valves included the supply to the suppression chamber vacuum relief, drywell ventilation supply, and containment inerting valves. On unit 2, valve 2-32-1755 (HPCI Control Air Supply) is missing from the valve checklist. Examples on unit 3 are 3-32-2276 (HPCI Control Air) 3-32-2224, 3-32-2225 (Containment Inerting Control Air).

This is a Severity Level IV Violation (Supplement I) applicable to all units.

1. Admission or Denial of the Alleged Violation (or Finding)

TVA admits to the violation as stated.

2. Reasons For the Violations (or Finding) if Admitted

The reason for the violation was due to a failure to update valve checkoff list as modifications were made to systems 32 and 32A.

3. Corrective Steps Which Have Been Taken and Results Achieved

The nine valves on unit 1, unit 2 HPCI control air supply valve (2-32-1755), unit 3 HPCI control air valve (3-32-2276), and containment inerting control air valves (3-32-2224 and 3-32-2225) are currently being placed in OI-32 and 32A. A complete walkdown of the Control Air System is being conducted and the system 32 and 32A drawings are being changed to reflect the actual configuration. The OI valve checklist will be changed when drawings are revised.

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

The Control Air System has been walked down by two Operations personnel and the system drawing and valve checklist is being updated from this physical verification. From this update and the approved procedures now in place, this problem will be eliminated in the future.

5. Date When Full Compliance Will Be Achieved

The listed valves will be corrected by July 2, 1984, and a full system evaluation will be completed by December 19, 1984.

ITEM NO. 3

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documented instructions or procedures. Browns Ferry Standard Practice 8.3 requires that plant modifications be completed by the use of a workplan.

Contrary to the above, the requirement was not met in that on April 24, 1984, old fuel racks were removed from the unit 2 fuel pool without the use of a detailed or adequate workplan to address the task action requirements or procedural steps.

This is a Severity Level IV Violation (Supplement I) applicable to unit 2.

1. Admission or Denial of the Alleged Violation (or Finding)

TVA admits to the violation as stated.

2. Reasons For the Violations (or Finding) if Admitted

Work was performed with an approved workplan although complete detailed instructions were not provided. Instructions were worded in such a manner that they were vague and could be misinterpreted.

3. Corrective Steps Which Have Been Taken and Results Achieved

The workplan was revised to clarify work instructions.

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

Individual personnel responsibilities are being redefined as part of the Regulatory Performance Improvement Program (RPIP), which will result in a more thorough preparation and review of instructions prior to their approval.

5. Date When Full Compliance Will Be Achieved

Full compliance was achieved on June 2, 1984.

ITEM NO. 4.a

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

- a. Contrary to the above, this requirement was not met in that control air system as-constructed drawings 47W847-9, -10, and -11 do not reflect the control air systems in the plant. On unit 1 valve 1-32-1278, isolation to PC-68-106, is not on the drawing. Isolation valve to FCV-70-1 is labeled 1-32-2554 in the plant but is not numbered on the drawing. Isolation valve to FCV-68-106 is labeled 1-32-1279 but is not numbered on the drawing. On unit 2, differences between plant valve identification tags and the drawings are 1278 (plant) versus 2121 (drawing), 1279 (plant) versus 2122 (drawing), 1894 (plant) versus no number (drawing), no label (plant) versus 2133 (drawing), 1397 (plant) versus 2132 (drawing), and 1781 (plant) versus 2139 (drawing). On unit 3, the drawing does not show the valve between 2121, 2122 and 696, 2322. Valve 2133 on the drawing is not labeled in the plant.

Item 4.a.

1. Admission or Denial of the Alleged Violation (or Finding)

TVA admits the violation as stated.

2. Reasons For the Violations (or Finding) if Admitted

The control air system was originally field fabricated and installed without adequately approved drawings.

3. Corrective Steps Which Have Been Taken and Results Achieved

A total system walkdown is being performed by plant personnel for the control air system flow diagrams to reflect the as-constructed status.

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

Accessible portions of this system have been walked down, drawings are being as-constructed, and a schedule is being developed for inspection of inaccessible portion of each unit. Final completion of RPIP long-term, item 2.1 (RPIP 2-1) (Resolution of open/incomplete ECNs, workplans, as-constructed drawings) is estimated to be January 1, 1986.

5. Date When Full Compliance Will Be Achieved

Full compliance will be achieved by January 1, 1986.

Item No. 4

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

Item 4.b

- b. Contrary to the above, this requirement was not met in that the following discrepancies in plant drawings, pressure switch setpoints, and annunciator were found as related to the fire protection area:
- (1) Browns Ferry Instrument Tabulation (drawing 47B601-026, page 40) gives the setpoint of pressure switch PS-26-44 as 120 psi for the header pressure. As constructed drawing 45N644-1 gives the setting as 100 psi.
 - (2) Design Change Request 1581, RI dated September 23, 1978 gives the setting of pressure switch PS-26-44A as 50 psig, but a setting of 60 psi is shown on drawing 45N644-1 and 35N731-9.
 - (3) Annunciation for 'Fire Protection Water Supply On' supplied from PS-26-44 was changed to 'Raw Service Water Pressure Low' supplied from PS-26-44A. Logic diagram 47W611-26-13 incorrectly shows the alarm being supplied from PS-26-44. Also, the control diagram for the annunciator system, 47W610-55-2, incorrectly shows the title and pressure switch number for the annunciator as PS-26-44, 'Fire Protection Water Supply On.'
 - (4) The installation of PS-26-44A is not correctly reflected in plant drawings. Flow diagram 47W836-1 shows an isolation valve for PS-26-44 but no valve for PS-26-44A. A valve is installed in the system. Panel drawing 47W600-51 does not show PS-26-44A on panel 25-139.

This is a Severity Level IV violation (Supplement I) applicable to all units.

ITEM NO. 4b

1. Admission or Denial of the Alleged Violation (or Finding)

TVA admits the violation occurred as stated.

2. Reasons For the Violations (or Finding) if Admitted

The as-constructed instrument tabulation (drawing 47B601-026, page 40) was as-constructed incorrectly. Modification Change Request No. 891 was implemented by workplan 5445 without as-constructing all affected drawings. Drawings 45N644-1 and 35N731-9 were incorrectly as-constructed.

3. Corrective Steps Which Have Been Taken and Results Achieved

Engineering Change Notice (ECN) P0210 has been issued by Engineering Design to correct the as-constructed drawing discrepancies and a workplan will be prepared to implement this remaining modification (see attachment memorandum).

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

ECN P0210 has been issued to correct these drawing discrepancies and a closer review of design change requests will be performed to avoid further violations.

5. Date When Full Compliance Will Be Achieved

Full compliance will be achieved by March 1, 1985.

ITEM NO. 5

Technical Specification 6.3.A.6 requires that detailed written procedures for surveillance and testing requirements be prepared, approved, and adhered to. Technical Specification 4.11.A.1.g requires that a fire protection building hydraulic performance verification be performed tri-annually.

Contrary to the above, the requirement was not met in that Surveillance Instruction No. 4.11.A.1.g was inadequate to assure that reactor building hydraulic performance was as described in the fire protection system design bases, the post-modification test (PT-13-1) or the Browns Ferry Fire Recovery Plan, Part X, Section A of 1976.

This is a Severity Level IV violation (Supplement I) applicable to all units.

1. Admission or Denial of the Alleged Violation (or Finding)

TVA admits a violation occurred with clarification as described in (2).

2. Reasons For the Violations (or Finding) if Admitted

Technical Specification 4.11.A.1.g does require a building hydraulic performance verification be performed tri-annually. Technical Specification 3.11.A.9 requires that the fire protection system be capable of supplying the individual loads listed in Table 3.11.A. Surveillance Instruction 4.11.A.1.g adequately assures that the individual systems are capable of supplying the individual loads listed in Table 3.11.A. Therefore, detailed written procedures for surveillance and testing requirements were prepared, approved, and adhered to which met the requirements of Technical Specifications 3.11.A.9, 4.11.A.1.g, and 6.3.A.6.

However, TVA does admit that the flows listed in Table 3.11.A. do not meet the commitment contained in the Browns Ferry Fire Recovery Plan, Part X, Section A, Revision 6, Page 41, paragraph 5.2.1.2(8) which states 'the piping will be hydraulically designed to provide the pressure necessary at the nozzles to supply the water density specified in (1) above with one 1-1/2-inch hose connection being used simultaneously.'

3. Corrective Steps Which Have Been Taken and Results Achieved

A Special Test (ST 8409R1) was conducted to verify that the piping will provide the pressure necessary at the nozzles to supply the water density specified in the Browns Ferry Fire Recovery Plan, Part X, Section A, Revision 6, Page 40, Paragraph 5.2.1.2(1) with one 1-1/2-inch hose connection being used simultaneously. All fixed cable tray water spray systems passed ST 8409R1.

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

TVA will conduct a design study to re-evaluate the design basis, the required flow and pressures, the required testing frequencies and the adequacy of test locations for the fixed cable tray water spray systems installed in accordance with the Browns Ferry Fire Recovery Plan. Table 3.11.A. and Surveillance Instruction 4.11.A.1.g will be revised based on the results of the design study.

5. Date When Full Compliance Will Be Achieved

Full compliance will be achieved by March 2, 1985.

ITEM NO. 6

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be accomplished in accordance with instructions, procedures, and drawings. Operating Instruction 32A (Drywell Control Air System) specified the required valve lineup for the drywell control air system. Operating Instruction 24 (Drywell Delta-Pressure Control Air Compressor System) specifies the required valve lineup for the drywell delta-pressure control air compressor system.

- a. Contrary to the above, the requirement was not met in that on April 5, 1984, drywell control air return filter bypass valve 1-32-2525 was found mispositioned in the open position. The master valve status checklist indicated the valve was shut which was contrary to the as-found position.
- b. Contrary to the above, the requirement was not met in the April 10, 1984, drywell delta-pressure control air compressor temperature regulatory bypass valve 2-24-876 was found mispositioned in the open position. OI-24 requires the valve to be shut. The master valve status checklist indicated the valve was shut which was contrary to the as-found position.

This is a Severity Level V violation (Supplement I) applicable to units 1 and 2.

1. Admission or Denial of the Alleged Violation (or Finding)

TVA admits the violation as stated.

2. Reasons For the Violations (or Finding) if Admitted

Failure to follow procedures was the reason for the violation.

3. Corrective Steps Which Have Been Taken and Results Achieved

Valve 1-32-2525 was realigned to the closed position as required by Operating Instruction 32A valve checklist. An abnormal status sheet was placed in the front of the master checklist to show that the bypass valve (2-24-876) was left in the open position to help in controlling the temperature on the delta P air compressor.

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

To prevent future problems of valve misalignment and documentation of abnormal valve alignment, the assistant unit operators have been assigned to review system status checklist more frequently to ensure the system status checklist reflect actual system status. Operational personnel will receive supplementary training which will cover these violations and ensure proper system status is maintained per Operating Instruction Letter 43.

5. Date When Full Compliance Will Be Achieved

Full compliance will be achieved by July 24, 1984.

ITEM NO. 7

10 CFR 50, Appendix B, Criterion X requires that a program for inspection of activities affecting quality shall be established and executed to verify conformance with documented instructions, procedures, and drawings for accomplishing the activity.

Contrary to the above, the requirement was not met as related to Mechanical Maintenance Instruction (MMI) 125 (Inspection, Testing, and Maintenance of Monorail Systems, Underhung Cranes, and Overhead Hoists) and MMI 130 (Mobile Cranes and Forklifts, Inspection, Testing, and Preventative Maintenance) as indicated by the examples below.

- a. Mechanical Maintenance Instruction (MMI) 125 requires a periodic inspection of monorail systems, underhung cranes, and hand-chain powered overhead hoists to be conducted on idle (over six months) equipment. No evidence was available for review to indicate this inspection was being scheduled or completed as required.

- b. MMI-125, Appendix 2, requires a frequent (not defined) inspection be conducted on hand-powered overhead hoists. The hooks are to be checked to ascertain the hook throat opening was not more than 15 percent greater than normal throat opening. The procedure did not specify the normal throat opening and no evidence that the inspection had even been conducted was available for review. Several mechanical engineers/technicians interviewed did not know what the normal throat opening would be for various size hooks. The procedure specifically deleted any data sheet requirements.
- c. MMI-130 requires wire rope inspections to include a check for proper rope reeving. The reeving of individual cranes was not listed in the procedure or known by mechanical craft personnel.
- d. MMI-130, data sheet 7, monthly wire rope inspection, is inconclusive on required signoff (one yes/no signoff for two determinants, step 1.c.) and does not address a signoff for each requirement in the procedure text. (No signoff to verify rope reeving.)

This is a Severity Level V Violation (Supplement I) applicable to all units.

1. Admission or Denial of the Alleged Violation (or Finding)

TVA admits to the violation as stated.

2. Reasons For the Violations (or Finding) if Admitted

Inadequate procedures were the reason for the violation.

3. Corrective Steps Which Have Been Taken and Results Achieved

A crane engineering specialist reviewed all the items inspected by MMI-125 and MMI-130 instructions and found the equipment to be non-critical components.

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

The procedures were completely rewritten and will be issued as Mechanical Maintenance Guidelines because they cover non-critical items. The items will also be incorporated into the computerized preventative maintenance program to avoid further violations.

5. Date When Full Compliance Will Be Achieved

Full compliance will be achieved by July 16, 1984 when MMI-125 and MMI-130 have been revised and changed to guidelines.

ITEM NO. 8

10 CFR 50, Appendix B, Criterion VI requires that measures shall be established to control the issuance of documents, such as drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents are distributed to and used at the location where the prescribed activity is performed. Browns Ferry Standard Practice 2.5 implements the drawing control procedures and requirements.

Contrary to the above, the requirements of Standard Practice 2.5 were not met in that control drawing 47W847-10 in the Technical Support Center (TSC) was of the wrong revision. The current revision is revision 3 where as revision 2 was found in the TSC control drawings.

This is a Severity Level V violation (Supplement I) applicable to all units.

1. Admission or Denial of the Alleged Violation (or Finding)

TVA admits the violation occurred as stated.

2. Reasons For the Violations (or Finding) if Admitted

The reason for the violation was personnel error on the part of a issue clerk. An out-dated copy of drawing 47W847-10 was in the TSC files.

3. Corrective Steps Which Have Been Taken and Results Achieved

The out-dated drawing was removed and the current revision of drawing 47W847-10 placed in the TSC.

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

All Drawing Control Center issue clerks were cautioned about the need for absolute accuracy in the drawing filing process.

5. Date When Full Compliance Will Be Achieved

Full compliance was achieved on April 19, 1984.