



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Arg.
TVA

June 21, 1988

PDR

The Honorable John D. Dingell, Chairman
Subcommittee on Oversight and Investigations
Committee on Energy and Commerce
United States House of Representatives
Washington, D. C. 20515

Dear Mr. Chairman:

I am enclosing NRC staff responses to the questions you raised in your May 25, 1988 letter concerning the Tennessee Valley Authority's nuclear program. Please let me know if you have any additional questions on these issues.

Sincerely,

Lando W. Zech, Jr.
Lando W. Zech, Jr.

Enclosures:
As Stated

cc: Rep. Thomas J. Bliley, Jr.

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QUESTION 1.

Mr. Roy E. Grimes, Sr. forwarded information to the Commission in a letter dated March 23, 1988. This letter indicates that Mr. Grimes believes questions concerning TVA's handling of material identification and traceability at the Sequoyah site have not been adequately resolved. Mr. Grimes indicates that he and a colleague were pressured by management to dilute their findings and to accept TVA's corrective actions that they believed were inadequate.

(A.1) What actions has the NRC taken to assess Mr. Grimes' contentions concerning inadequate resolution of the material identification and traceability issues at Sequoyah?

ANSWER.

The technical allegations in the March 23, 1988 letter from Mr. Grimes were encompassed in the concerns addressed in TVA's Employee Concern Element Report MC-40703-SQN, "Heat Code as Related to Material Control," dated May 12, 1987, which was evaluated by the NRC staff. The NRC evaluation was included as an enclosure to the letter dated March 11, 1988 from G. Zech to S. White and was entitled "SER for Employee Concerns Element Report MC-40703-SQN Heat Code as Related to Material Control." In the Safety Evaluation Report, the staff, based on its own inspections, found TVA's resolution of the material and traceability issues to be adequate. During a June 1987 inspection on this issue (documented in Inspection Report 50-327,

QUESTION 1. (Continued)

-2-

328/87-44), Mr. Grimes and his colleague were interviewed by members of the inspection team concerning their differences with TVA's corrective actions, and the results of those interviews were factored into the staff's evaluation of the issue. Mr. Grimes' allegations will also be addressed in Allegation Evaluation Report OSP-88-A-0034, "Material Control," which will be issued after the staff interviews Mr. Grimes and his colleague again to ensure the NRC completely understands their concerns and has addressed each of them. The staff intends to conduct these interviews this month.

The staff is also considering whether an investigation should be conducted regarding Mr. Grimes' allegations of harassment and intimidation. To assist in making this determination, the above-described interviews will be conducted with assistance from the Office of Investigations.

QUESTION 1. (Continued)

-3-

(A.2) What was the result of any such assessment?

ANSWER.

TVA's resolution of the concerns about material identification and traceability at Sequoyah were acceptable to the staff as indicated in the response to the previous question.

QUESTION 1. (Continued)

-4-

(A.3) What were the dates of any such actions and/or assessments?

ANSWER.

The Safety Evaluation Report on MC-40703-SQN, "Heat Code as Related to Material Control," was issued on March 11, 1988.

Allegation Evaluation Report OSP-88-A-0034, "Material Control," is yet to be issued. It is not known at this time whether the licensee harassed and/or intimidated the evaluators in an attempt to make them change their reports. This subject may be pursued by the Office of Investigations.

QUESTION 1. (Continued)

-5-

(B.1) Prior to the receipt of Mr. Grimes' letter, what analyses had been performed by the NRC of TVA reports MC-40703-SQN, MC-40705-SQN, MC-40709-SQN, Executive Report on Heat Code Traceability Issues at Sequoyah Nuclear Plant, CATD's 40703-SQN-01 through -09, NCR 5087 RI, and associated documents? Provide any such analyses.

ANSWER.

The staff's Safety Evaluation Reports (SER) for the licensee's Employee Concern Element Reports MC-40703-SQN, Revision 2, dated May 12, 1987, and MC-40705-SQN, Revision 1, dated October 31, 1986, were issued on March 11, 1988, and are enclosed as you requested. MC-40709-SQN, Revision 1, dated May 12, 1987, was reviewed by the staff in Inspection Report 50-327, 328/87-44, which is also enclosed. The licensee's "Executive Report on Heat Code Traceability Issues at Sequoyah Nuclear Plant" is part of Employee Concern Element Report MC-40703-SQN, Revision 2. CATD 40703-SQN-01 through -09 and the associated documentation were reviewed by the NRC inspection team as part of the review of the licensee's "Executive Report on Heat Code Traceability Issues at Sequoyah Nuclear Plant." This review is documented in Inspection Report 50-327, 328/88-44.

QUESTION 1. (Continued)

-6-

NCR 5087, Revision 1 originated at Watts Bar and was made generic to Sequoyah. The nonconformance report identified material with identical heat numbers and descriptions for ASME Class I and other code classes installed in Class I systems. The corrective action plan, which consists of assessing the pipes for suitability and replacement, if necessary, is being tracked under CATD 40703-SQN-07. The staff has found the proposed corrective actions to be acceptable.

QUESTION 1. (Continued)

-7-

(B.2) What analyses of such documents have been made since receipt of Mr. Grimes' letter? Provide any such analyses.

ANSWER.

Mr. Grimes' letter was received after the licensee's Employee Concern Element Reports and Corrective Action Plans were evaluated. These reports and plans are being evaluated again during the preparation of Allegation Evaluation Report OSP-88-A-0034, "Material Control." This report will be provided when it is completed.

- (C) Has NRC staff prepared an item by item analysis of the disparate conclusions and proposed corrective actions enumerated in the following: MC-40703-SQN, the HCTTG ~~Materials~~ Traceability for Piping Systems SQN Report (B25870225-036), and the Executive Report on Heat Code Traceability Issues at Sequoyah Nuclear Plant?

ANSWER.

Although the staff has not prepared a written item by item analysis of the documents, the staff reviewed the documents when evaluating TVA's material traceability program. There was agreement between the Heat Code Traceability Task Group (HCTTG) and the ECTG task force on five of the six heat code traceability actions recommended by the ECTG in their report MC-40703-SQN, Revision 2, which incorporated the "Executive Report on Heat Code Traceability Issues at Sequoyah Nuclear Plant." The sixth recommendation called for a reexamination of all of the licensee's Class A, B, C and D piping. The HCTTG concluded that the issue was limited to piping two inches in diameter and smaller and could be resolved by analysis. The HCTTG investigation was documented in the licensee's report B25870226-036, "HCTTG Materials Traceability for Piping Systems."

The staff evaluated the ECTG and HCTTG investigation in an inspection during June 22-26, 1987, and interviewed Mr. Grimes and his colleague during the inspection concerning the differences in the recommendations and their concerns. The results of that inspection are documented in Inspection Report 50-327, 328/87-44. The staff was satisfied with the licensee's evaluation and resolution except for three inadequacies related to calculations, allowable stresses, and over-stressed small bore piping. Subsequent analysis and NDE testing by the licensee satisfied the staff on these three inadequacies and is documented in the Safety Evaluation Report, "SER for Employee Concerns Element Report MC-40703-SQN Heat Code as Related to Material Control," issued on March 11, 1988.

QUESTION 1. (Continued)

-10-

- (D.1) What actions has the NRC taken to assess Mr. Grimes' contentions that he and a colleague were subjected to harassment and intimidation to modify their findings as TVA management sought to pressure them to dilute their findings and to accept corrective actions which they believed were inadequate?

ANSWER.

The staff is considering whether an investigation should be conducted regarding Mr. Grimes' allegations of harassment and intimidation. To assist in making this determination, Mr. Grimes and his colleague will be interviewed by the staff with assistance from the Office of Investigations.

QUESTION 1. (Continued)

-11-

(D.2) What was the result of any such assessment?

ANSWER.

The assessment is not yet complete.

QUESTION 1. (Continued)

-12-

(D.3) What were the dates of any such actions and/or assessments?

ANSWER.

The assessment is not yet complete.

QUESTION 2.

An internal TVA memorandum from J. A. Domer to M. J. Ray dated April 18, 1988, appears to describe a meeting between TVA and the Hartford Steam Boiler Inspection and Insurance Company (HSBII) concerning the then forthcoming enforcement conference related to harassment and intimidation of Authorized Nuclear Inspectors (ANIs) at the Watts Bar Nuclear Plant. The enforcement conference was held on May 10, 1988. Item 4 of the Domer memorandum states: "HSBII does not now believe we meet ASME Code requirements on WBN unit 1."

- (A) Did TVA and/or HSBII inform the NRC of the substance of Item 4 at the enforcement conference? If not, why not?

ANSWER.

Although TVA did not explicitly inform the NRC during the enforcement conference held on May 10, 1988, that Hartford Steam Boiler Inspectors and Insurers (HSBII) did not believe that TVA met the ASME Code, TVA did inform the NRC staff that it did not intend to rely on the "use-as-is" disposition of NCR 5609 regarding the hydrostatic test of the Watts Bar Unit 1 flued head penetrations. TVA stated that the penetrations would be retested. The decision by TVA to hydrostatically test the penetrations makes the content of the "use-as-is" disposition of NCR 5609 irrelevant.

QUESTION 2. (Continued)

-2-

(B.1) If the NRC was informed of the substance of Item 4, in what manner did TVA not meet ASME Code requirements at Watts Bar?

ANSWER.

TVA had a contract with Tube Turns (Louisville, Kentucky) for designing, fabricating and assembling, inspecting and testing, cleaning, marking, and shipping the containment piping penetration assemblies for Watts Bar plant. TVA was the site installer for the assemblies. Both the shop fabricator and the site installer are required by the ASME Code to have the services of an ANI under contract. The piping penetration assembly contract required Tube Turns to use the latest editions and addenda of codes, standards, and specifications that were called for or referred to. These penetration assemblies were to follow ASME Code, Section III, Class 2 requirements. Although TVA's purchasing contract required that the penetrations be fabricated according to ASME Code, Section III requirements, it did not explicitly specify that the penetrations were to be hydrostatically tested by Tube Turns. Tube Turns believed that they did not have to hydrostatically test the penetrations to the Code requirements because they classified penetrations as subassemblies. The ASME Code allows the subassemblies to be hydrostatically tested as part of subsequent system testing.

TVA's procurement and engineering personnel were cognizant that some vendor welds were not examined by hydrostatic testing by the vendor. However, this information was not properly identified to Watts Bar construction/testing personnel to ensure that the welds would be examined during system testing. Consequently, the drawings used by TVA to plan the systems' hydrostatic tests showed the penetrations as complete units containing no welds to be inspected. The system hydrostatic tests were subsequently performed, and the TVA field welds were not visually examined for leakage by TVA nor TVA's ANI during the system hydrostatic test.

QUESTION 2. (Continued)

-4-

(B.2) What explanation was presented as to the generic implications with respect to Watts Bar and Sequoyah of TVA not meeting ASME Code requirements at Watts Bar?

ANSWER.

The generic implications applicable to Sequoyah as a result of TVA not meeting the Code requirements at Watts Bar were not discussed at the meeting. The generic implications of the concern were addressed by TVA in Employee Concerns Element Report C017105-SQN, Revision 2, dated March 10, 1987. By letter dated March 11, 1988, from G. Zech to S. White, the staff issued a safety evaluation on this concern entitled "SER for Employee Concern Element Report C017105-SQN, Pipe/Fittings as Related to Construction" based on TVA's input that appropriate code requirements at Sequoyah had been met. The staff and TVA are currently reverifying that the requirements were met.

- (C) Aside from the Domer memorandum, what actions have been taken by NRC to determine, with respect to Watts Bar and Sequoyah, the generic implications of the breakdown in the ANI process that occurred at Watts Bar?

ANSWER.

To ensure that the problems in the ANI process that occurred at Watts Bar do not recur at TVA, the NRC is considering the matter for escalated enforcement.

To ensure that pressure on ANIs to accept conditions that were not in conformance with the ASME Code was not a generic issue at other plants, the NRC sent a letter to ASME and the National Board of Boiler and Pressure Vessel Inspectors on March 21, 1988, providing them with copies of the investigation summaries and requesting ASME to provide a response indicating what actions ASME planned to take. ASME responded on April 1, 1988, indicating that no additional investigatory effort appeared necessary for the specific case. However, the NRC met with ASME and the the National Board on May 25, 1988, to discuss this issue. ASME indicated to the staff that it has initiated an effort to develop an audit program for Authorized Inspection Agencies. The NRC staff is participating on the task group that is developing the scope of such audits. One of the issues which the staff believes should be addressed during the audits would be how differences of opinion on technical issues between the ANI and his management are resolved.

QUESTION 3.

On February 17, 1988, the TVA Nuclear Manager submitted to the Commission information pertaining to TVA's review of its welding program at Watts Bar. Press reports implied that the weld review, conducted by EG&G, had determined that TVA's welding program at Watts Bar had been implemented in accord with TVA's licensing commitments and 10 CFR 50, Appendix B.

- (A) What reviews have the NRC conducted of the EG&G report on its review of the TVA welding program? Provide reports (including drafts) of any such reviews prepared by NRC inspectors, management, or other staff.

ANSWER.

Since both NRC and TVA resources are limited, TVA and NRC have been concentrating resources on Sequoyah and Browns Ferry rather than on Watts Bar, which is TVA's third priority. As a result, the staff has not yet completed its review of the EG&G report on the welding program at the Watts Bar facility. The Resident Inspector at Watts Bar has conducted a preliminary examination of the EG&G report and has prepared a draft evaluation that has been provided for management review. A copy of several drafts of the evaluation are provided pursuant to your request. Since this evaluation is only in draft form and has not had the benefit of management review, we request that it not be publicly disclosed.

QUESTION 3. (Continued)

-2-

Because of the widespread interest in the EG&G report, the NRC has decided to revise its priorities and is making a special effort to complete its review of the report by mid-July 1988. It should be noted that the EG&G report is only one part of TVA's evaluation of welding at Watts Bar. TVA has not yet submitted their corrective action program for Watts Bar Unit 1 and has started to reinspect Watts Bar Unit 2 only recently.

QUESTION 3. (Continued)

-3-

- (B) Did EG&G conclude that TVA's welding program at Watts Bar is now and always has been adequate? If so, does the NRC staff agree with any such conclusion? —

ANSWER.

The staff has not completed its review of the EG&G report and is not yet prepared to answer this question. The staff expects to complete its review of the report by mid-July 1988.

QUESTION 3. (Continued)

-4-

- (C) Does LDC staff believe that, as of March 20, 1986, the Watts Bar welding program, including its implementation, was in overall compliance with 10 CFR 50.55 Appendix B?

ANSWER.

Between the Spring of 1985 and March 20, 1986, there had been numerous employee concerns raised regarding TVA's welding program and its implementation at the Watts Bar site. As the staff started to review the issues of these concerns and after a preliminary review of the EG&G reinspection results, the staff reached a judgement in December 1986. By letter dated January 5, 1987, from V. Stello to C. Dean, the staff concluded that "... there was a significant breakdown, as delineated in 10 CFR 50.55(e), in the inspection of structural steel welding as well as in the area interpretation of Code required radiographs of piping welds." The enclosure to the January 5, 1987 letter provides specific areas where the breakdowns had occurred.

By letter dated January 11, 1987, S. White to V. Stello, TVA acknowledged, among other things, that "... TVA has had serious problems in the areas of structural steel welding and interpretation of radiographs."