



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

William J. Museler  
Site Vice President, Watts Bar Nuclear Plant

MAR 21 1994

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

Gentlemen:

In the Matter of the Application of ) Docket Nos. 50-390  
Tennessee Valley Authority ) 50-391

WATTS BAR NUCLEAR PLANT (WBN) - UNITS 1 AND 2 - NRC INSPECTION REPORT NO. 50-390, 391/93-70 - RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

- References:
1. TVA Response to Notices of Violation 390/93-70-01 and 390/93-70-02, dated December 14, 1993
  2. TVA Supplemental Response to Notices of Violation 390/93-70-01 and 390/93-70-02, dated December 23, 1993
  3. NRC Review of Responses to 50-390, 391/93-70, February 17, 1994

The purpose of this letter is to respond to the NRC requests for additional information concerning the TVA violation responses for 390/93-70-01 and 390/93-70-02, References 1 and 2. Staff review of the December 14 and December 23, 1993 responses identified several issues involving the two violations that required clarification. These issues were documented in the NRC transmittal of February 17, 1994, Reference 3.

The enclosure to this letter supplements the earlier responses and addresses the identified staff concerns.

No new commitments are contained in this submittal.

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If you should have any questions, contact P. L. Pace at (615)-365-1824.

Very truly yours,



William J. Museler

Enclosure

cc (Enclosure):

NRC Resident Inspector  
Watts Bar Nuclear Plant  
Rt. 2, Box 700  
Spring City, Tennessee 37381

Mr. P. S. Tam, Senior Project Manager  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, Maryland 20852

U.S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 1  
SUPPLEMENTAL RESPONSE TO TVA'S REPLY  
TO NOTICES OF VIOLATION 390/93-70-01  
AND 390/93-70-02

NRC Issue

1. Regarding the response to Violation A (390/93-70-01) in your December 14, 1993 submittal, the paragraph listed on page E1-2, titled "Corrective Steps That [Have] Been Taken and Results Achieved", you concluded that "Based on the review of work plans and personnel interviews, the extent of condition is believed to be limited to the subject supports". Please provide your basis for this belief and assurance that the extent of condition is limited to the subject supports.

TVA Response

A group of 13 similar workplans (workplans that required shop fabrication and field installation) was reviewed by Quality Assurance (QA) to provide adequate assurance to the judgment that this condition is isolated. The review found that none of the workplans had conditions adverse to quality within them.

Interviews were also conducted with Quality Control (QC) inspectors, craft, foremen, superintendents, and field engineers to ascertain if any similar conditions as those listed exist. None of the personnel interviewed recalled any conditions adverse to quality similar to the conditions listed.

Based on the review and the interviews, the extent of condition is believed to be limited to the subject conduit supports 1-D0885918-4 through 9-F26991A.

Additionally, the shop fabrication inspection was the first in a sequence of inspections (craft, field engineer, and QC) that would be required before completing an installation of this type and similar supports. The supports in question never reached their installation destination, because upon inspection by the craft foreman, before installation, the support fabrication was found not to be in compliance with the design output document(s) and returned to the shop. If the foreman had missed the fabrication error, then the craft installing the subject supports would have realized the supports were not in accordance with the design output document(s), because the physical installation would have been impossible without altering the supports.

Based on the review by QA of 13 similar workplans and interviews with personnel involved with the fabrication and installation of supports, there is a reasonable level of assurance that the extent of condition is limited to the subject supports. The fabrication, installation, inspection verifications, QA overviews and assessments, and the reporting of adverse conditions (noted increase in documented CAQs) also provides confidence that the programs in place are effective.

NRC Issue

2. In both your initial and supplemental responses to Violation 390/93-70-01 and Violation B (390/93-70-02) you indicate memorandums were issued to correct the various nonconforming conditions. Since memorandums are not considered a QA controlled document and generally have a very limited time span effectiveness, please provide information stating how TVA is assuring continued compliance with the memorandums. Please indicate whether the training provided as corrective actions for these violations was one time only or has been incorporated into the WBN training program.

TVA Response

The causes of the violations were "personnel" errors and not due to "process" problems. The memorandums were used to reemphasize and heighten the awareness of the involved personnel to the subject violations. Distribution of these memorandums was expanded to the larger population to share the findings and to aid in preventing similar problems by others. The subject memorandums issued as a result of these two violations helped provide the general population with a) an additional awareness that procedures are in place controlling work, b) an emphasis on self-checking, c) a definition of in-process work, and d) the importance of reporting conditions adverse to quality (CAQs) promptly.

Conditions adverse to quality are reported in accordance with the applicable procedures and may result in corrective actions that include specific training or revised procedures. These corrective actions may not encompass the general population, but a memorandum can be used to provide lessons learned. Procedural compliance, self-checking, and the recognition and reporting of CAQ conditions are all part of the General Employee Training (GET) 10/11. Memorandums are being used in addition to this and any other required training.

### NRC Issue

3. Regarding your response to Violation 390/93-70-02, and as listed on page E2-2, titled "Reason for the Violation", you indicate the violation for examples 1, 3 and 4 occurred as a result of personnel error caused by inadequate training. Further, in a documented submittal to the NRC dated July 20, 1993 titled "Quality Assurance Effectiveness at WBN" you advised us that "The ... line organizations depend on QA as the last barrier of defense and expects QA reviews, monitors, and inspections to achieve the required level of quality rather than the line organizations themselves assuming the prime responsibility for quality". In the same July 20, 1993 response, you indicate "Additionally, the WBN line organizations are developing an action plan which will increase the emphasis on line management accountability for the achievement of quality performance." Please provide information stating when compliance was achieved, or will be achieved, regarding implementation of the subject "action plans" and whether these action plans include training that should prevent this violation from reoccurring. In addition to the actions initiated by the line, what action was or is being done by the WBN QA Organization to assure the line organizations still are not relying on QA to achieve the required level of quality?

### TVA Response

A line action plan was developed as stated in our July 20, 1993 response. The plan contained specific actions designed to increase the quality awareness and accountability of the line organizations. Although the plan did contain specific actions, the success of the plan would be determined by the attitude and performance resulting from the actions.

The plan focused on three areas: expectations, awareness, and accountability. Quality expectations were rolled-out from the vice president level down into the line organizations, with the main expectation being that line organizations/individuals were to adopt a proactive approach to quality. Specific expectations provided by the Site Vice President (VP) and the Vice President, Completion Assurance in an August 3, 1993 memorandum were as follows:

1. Quality performance is the responsibility of the individual doing the work:
2. Line management is responsible and accountable for establishing and achieving quality performance and establishing WBN's quality expectations.
3. Quality and efficiency are never subordinate to production pressure.
4. Line organizations are responsible for monitoring the achievement of quality, providing feedback to the individuals doing the work, and aggressive resolution of quality issues.

Awareness was provided through quality indicators (QI) developed by the line organizations for the line organizations. In other words, the QIs were selected by the line to self-measure their ability to produce a product which meets quality performance attributes. These QIs are recorded and trended weekly to determine if satisfactory performance is obtained and maintained. If available,

quality assurance measurements are used to calibrate these results. When negative trends are established, this serves as an action point for the line organization to take corrective measures. In addition, the plan called for increased line management walking spaces and plant tours to allow management to communicate expectations and gain awareness of quality implementation.

Accountability for quality comes with ownership. Line management updates the QIs weekly and is expected to take the necessary actions to address any areas that do not satisfy the established acceptable quality levels (AQL). These are discussed in the Site VP's Weekly Project Meeting where focus is made on the results of the indices and the trends. A quality accountability forum has been established through the monthly Quality Improvement Meeting, which is chaired by the Vice President, Completion Assurance and attended by the Site VP. During this meeting line managers address those areas wherein problems exist for their particular organizations; specifically, these managers are to give an account of actions taken to remedy the problems. In addition, this meeting provides an opportunity for managers to discuss emerging quality issues and specific preventive actions that might need to be implemented.

Regarding training associated with our quality improvement initiative, the General Employee Training (GET) has been revised to enhance that portion addressing line accountability for quality. All site personnel are required to update their GET training annually. In addition, a video is currently in production that contains messages from the Site VP and the VP, Completion Assurance further delineating the quality expectations of senior site management. This video will be used as an enhancement to the GET training.

In order to further enhance the overall quality awareness and accountability, the Site VP announced a "Quality Initiative Rollout" in January. The purpose of this rollout was threefold:

1. To bring all WBN employees up to speed on our progress in resolving quality concerns at the plant.
2. To re-emphasize the importance of each individual in getting the job done right the first time, building in quality as we are doing the job and not relying on inspecting it in.
3. To ask for help from all members of the WBN Team in watching out for quality problems and resolving them.

The initial rollout was completed in February. Targeted were the non-manual, site, and contractor personnel. This initiative will be continued through the T.E.A.M (Together Everyone Achieves More) meetings, which are scheduled to begin in April. The T.E.A.M. meetings are designed to provide an additional forum for employees and management to communicate regarding all aspects of the project with emphasis on quality awareness and accountability.

The measurement of the success of the line action plan and the Site VP's quality awareness initiative lies in the attitude exhibited by the line organizations/individuals in accomplishing their required tasks and the improved quality performance of the line organizations. Improvement has been noted as indicated by the following:

- Most AQLs are being maintained in the upper 90 percentile.
- More conditions adverse to quality are now being identified by the line organizations as opposed to WBN NA (66% in the second quarter of FY93 versus 89% in the first quarter of FY94).
- Results of independent assessments by WBN NA (reduction from 17 areas needing improvement in the January 1994 HFT Readiness Report down to 8 in February 1994).

Continued management attention will be maintained to further improve the ownership of quality by line organizations.

The WBN NA Organization has taken the following actions to assure the line organizations still are not relying on QA to achieve the required level of quality:

- A meeting was held with each Line Organization to provide NA's expectations concerning higher thresholds for acceptable quality performance.
- NA provided input to the development of the line organization QIs and AQLs. These QIs and AQLs were reviewed by NA.
- NA tracks and reports weekly the status of Line Organizations identified versus NA identified CAQs.
- NA has improved the WBN corrective action trending program as reported in the TVA NA Quarterly Trend report and the WBN HFT Windows report. This in turn provides increased focus on quality performance by WBN line organizations.

#### NRC Issue

4. On page E2-3 of the response letter, you indicate a memorandum will be issued stressing the importance of ensuring that data sheets are updated per the current procedures. Since this memorandum apparently was not issued between the time the NOV was issued on November 12, 1993 and the date of your response, December 14, 1993, please provide information stating how compliance was assured during the interim 30 day period. Were any data sheets being processed regarding this issue during this time period? Further, as required by 10 CFR 2.201, when will full compliance be achieved regarding issuing this memorandum and other stated corrective actions for Violation 50-390/93-70-02? The letter stated that full compliance will be achieved when PER WBP930338 is completed. The letter indicates the PER had a completion date of December 31, 1993. Currently, the PER has a completion date of June 29, 1994 and your supplemental response states the subject PER has been rescheduled for completion to coincide with the system turnover. Please provide a specific date when full compliance will be achieved for this Violation.

#### TVA Response

The memorandum issued stressing the importance of ensuring that data sheets are updated per current procedures was issued for Mechanical Engineering on October 15, 1993.

Memorandums for Electrical and Civil Engineering were issued on December 14 and 6, 1993 respectively, to ensure that data sheets that were issued in workplans have the correct information. This was accomplished by verifying the data sheets have the latest procedural requirements in workplans that were in process, and adding a sheet for the field engineer to verify the data sheet has the latest requirements when the workplan(s) is being placed in work status.

The memorandum for the Mechanical Engineering group was issued as an interim action for the PER. Electrical and Civil was issued as a recurrence control action in Revision 1 of the PER.

Since Mechanical used the majority of undercut anchors, Electrical and Civil were not included in the corrective action of Revision 0 of the PER. The time frame in question was only for the undercut anchors installed by Electrical and Civil. The anchor installations were reviewed by the CAQ group for completed data sheets from the QA Trend Report, ensuring that the information on the data sheets was complete and per the procedural requirements.

As noted in the supplemental response, the PER has been rescheduled for completion to coincide with the system turnover. June 29, 1994 is currently the date for closure of the PER; therefore, full compliance will be achieved at this date.

NRC Issue

5. On Page E2-3, your response stated that "In addition, TVA is considering generally broader procedural issues." Please provide more details concerning what procedure changes are being considered and how they relate to or affect the corrective actions already taken.

TVA Response

The statement in our December 14, 1993 submittal "In addition, TVA is considering generally broader procedural issues" was made in recognition of the fact that several problems were identified in various disciplines relative to procedural compliance. To address this issue, meetings were conducted with a large number of the site personnel during the months of January and February 1994, highlighting the need to focus increased attention on procedural compliance and attention to detail. The recent examples of this condition were discussed among the meeting attendees in order to instill awareness and a confidence that each team member can and should do his or her part to reduce the number of these occurrences.

#### NRC Issue

6. The response letter dated December 14, 1993 contains a statement that TVA concurs with Violation 50-390/93-70-02. However in the supplemental response you include a statement "As described in the initial response, quality control inspections were not performed in accordance with the criteria set forth in the applicable procedure. However, in the course of reviewing the actions associated with the ... referenced PER, our review indicated that in the cases cited in the violation the approved work instructions provided the installation requirements, which the Quality Control inspectors followed in performing their inspections. TVA notes that this is consistent with TVA's implementation of Site Standard Practice (SSP) 3.01." Please clarify the intent of this supplemental statement. Is the supplement a denial of the violation or a clarification that QC inspections would not be expected to detect a violation of requirements when the field engineer made a mistake on field data sheets? We concur with your statement in the next paragraph that indicates it is the responsibility of the work instruction preparer to provide correct requirements in the work instructions. However, your July 20, 1993 letter indicated this responsibility was not being accepted by the line organizations, rather the line organization was relying on QC to ensure quality. To assure procedural compliance, as committed to in the December 14, 1993 response, is SSP 3.01 being revised to require the QC inspector to assure procedural compliance rather than allowing reliance on the data sheets?

#### TVA Response

The supplemental response is not a denial of the violation. The purpose of the supplemental response was to indicate that QC is expected to identify mistakes on data sheets when such mistakes are related to procedures/requirements that would normally fall under QC scope of knowledge. For example, we expect a QC inspector to identify an incorrect torque value on a data sheet for expansion anchors since this information is contained in the MAI procedures in which the inspector has been trained and is expected to be knowledgeable of requirements. We would not, however, expect the QC inspector to identify discrepancies in a cable pull calculation that are also reflected on a data sheet since QC inspectors have not been trained/qualified to perform or review such calculations.

We do not consider that it is necessary to revise SSP 3.01 to assure procedural compliance. What was needed, and has been done, was to clearly re-emphasize expectations to QC inspectors.