P31

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50243

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern: WBP-6-011-001

Category: 53 Confidentiality NA YES NA NO(I&H)

Supervisor Notified: YES X NO NUCLEAR SAFETY RELATED YES

Concern: The "homemade" Benders in the top of the Turbine Building appear to be Carbon Steel and are being used to bend Stainless Steel. These benders have been in use for at least four years. These same type Benders are in the Stainless Steel Shop located to the left of the Hanger Shop.

Construction dept. concern.

CI has no further information.

No follow up required.

W. Blair S. Stetson JAN 16 1986

MANAGER, ERT DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ___

NSRS/ERT ___

NSRS ✓ JDS

OTHERS (SPECIFY) ___

Material Control

Bruce L. Loethen 1-21-86

NSRS DATE

PSF

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS

TRANSMITTAL NUMBER T50244

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1

Concern #WBP-_ 013-002

_ 1-26-137-WBP

Category: 53

Confidentiality:___Yes____No(I&H)

Supervisor Notified:____Yes__X_No

Nuclear Safety Related_YES_

Concern: CRAFT (KNOWN) OFTEN DETERMINES THE CONFIGURATION OR DESIGN THAT CAN BE INSTALLED AND THEN ENGINEERING PERFORMS THE SKETCH AND CLAIMS CREDIT FOR THE DESIGN. CONSTRUCTION DEPARTMENT CONCERN. CI HAS NO FURTHER INFORMATION.

CRAFT/ENGINEERS

JAN 16 1986

Manager, ERT — Date

NSRS has assigned responsibility for investigation of the above concern to:

ERT_______

NSRS/ERT_______

NSRS____✓____ X1

OTHERS (SPECIFY)______________________________

Hanger Install

1-21-86

NSRS — Date

PSR

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50244

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern #WBP-6-014-001

I 86 139-WBP1

Category: 53 Confidentiality:___Yes___No(I&H)

Supervisor Notified:____Yes__X_No Nuclear Safety Related_YES_

Concern: CI QUESTIONS THE METHOD OF KICKING A SWITCH IN THE CONTROL ROOM TO SHUT OFF THE AUDIBLE PART OF AN ALARM RATHER THAN HAND MANIPULATION. (NAMES/DETAILS KNOWN). NUCLEAR POWER DEPARTMENT CONCERN. CI HAS NO FURTHER INFORMATION.

William A. Hosler JAN 16 1986
Manager, ERT Date

NSRS has assigned responsibility for investigation of the above concern to:

ERT_____

NSRS/ERT_____

NSRS___✓___ WDS

OTHERS (SPECIFY)_____

Operations Control

Bruce L. Siefken 1-21-86
NSRS Date

P5R

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50237

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 3 Concern # WI-85-054-004

Category: 19 Confidentiality: NA_ YES NA_NO(I&H)

Supervisor Notified: _X_YES ___ NO NUCLEAR SAFETY RELATED ~~NO~~ YES

Concern: CI was directed by a supervisor to violate procedures. CI's foreman just relayed the instructions and did not say anything about it. Details known to QTC, withheld due to confidentiality. No further information may be released.

CI has no further information.

Nuc. Power Department concern.

No follow up required.

William L. Lichau 1/14/86
MANAGER, ERT DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ✓

NSRS/ERT _____

NSRS _____

OTHERS (SPECIFY) _____

Bruce L. Bratton 1-17-86
NSRS DATE

2A Violation

PJR

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50237

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern # WI-85-081-001

Category: 58 Confidentiality: NA_ YES NA_NO(I&H)

Supervisor Notified: _?_YES _?_ NO NUCLEAR SAFETY RELATED YES_

Concern: Documentation of piping hangers was destroyed by the responsible engineer following the engineer's firing, resignation or quitting. Replacement engineers assigned to the System falsified the documentation rather than going over the system and rechecking it. This renders the hardware quality indeterminate.

Construction Department concern.

CI declined to provide additional information.

No follow up required.

William L. Locke 1/14/86
MANAGER, ERT DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ___

NSRS/ERT _____

NSRS ___V__ PRW

(OTHERS) (SPECIFY) QGC

Bruce L. Siefken 1-17-86
NSRS DATE

Hanger Document

P5C

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50237

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern # WI-85-081-00E

Category: 88 Confidentiality: NA_ YES NA_NO(I&H)

Supervisor Notified: _?_YES _?_ NO NUCLEAR SAFETY RELATED YES_

Concern: Hanger documentation has be( ) falsified. CI declined to provide additional information.

Construction Department concern.

No follow up required.

W. Thomas Dietz 1/14/86
MANAGER, ERT DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ___

NSRS/ERT _____

NSRS ___✓___ PRW

OTHERS (SPECIFY) OGC

Bruce P. Siephen 1-17-86
NSRS DATE

FSR

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50237

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern # WI-85-081-003

Category: 33 Confidentiality: NA_ YES NA_NO(I&H)

Supervisor Notified: _?_YES _?_ NO NUCLEAR SAFETY RELATED YES_

Concern: The supports surrounding the steam generators were supposed to have been preheated before welding, but they were not. CI declined to provide any additional information.

Construction Department concern.

No follow up required.

William S. Stokes 1/14/86
MANAGER, ERT DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ___

NSRS/ERT _____

NSRS ___✓___ E6+6

OTHERS (SPECIFY) _____

Bruce L. Siefken 1-17-86
NSRS DATE

Welding
Workmanship

W5K

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50237

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern # WI-85-081-004

Category: 33 Confidentiality: NA_ YES NA_NO(I&H)

Supervisor Notified: _?_YES _?_ NO NUCLEAR SAFETY RELATED YES_

Concern: The stainless shield surrounding the Reactor had some bad welds (porosity). CI declined to provide additional information.

Construction Department concern.

No follow up required.

William [signature] 1/14/86
MANAGER, ERT DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ___

NSRS/ERT _____

NSRS ___✓___ EG+G

OTHERS (SPECIFY) ______________________________

Welding Workmanship

Bruce L. Siefken 1-17-86
NSRS DATE

PJR

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50237

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern # WI-85-081-005

Category: 33 Confidentiality: NA_ YES NA_NO(I&H)

Supervisor Notified: _?_YES _?_ NO NUCLEAR SAFETY RELATED YES_

Concern: In the period of 1974 to 1976, welds were made (some with open butt 7018 rod) that did not conform to the procedure. Later on, the welds were updated on paper, but were not reworked to the later procedure.

CI declined to provide additional information.

Construction Department concern.

No follow up required.

William S. Lecheler 1/14/86
MANAGER, ERT DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ___

NSRS/ERT _____

NSRS ___✓___ E&R6

OTHERS (SPECIFY) _____

Welding Workmanship

Bruce L. Lieffort 1-17-86
NSRS DATE

P5 1-

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER TS0237

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern # WI-85-081-007

Category: 7 Confidentiality: NA_ YES NA_NO(I&H)

Supervisor Notified: _?_YES _?_ NO NUCLEAR SAFETY RELATED YES_

Concern: CI expressed that welding inspectors are not qualified for the job. CI stated that an inspector needed to be a welder so the inspector would know what to look for in a good weld.

CI declined to provide any additional information.

Construction Department concern.

No follow up required.

W. Stevens 1/14/86
MANAGER, ERT DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ✓

NSRS/ERT _____

NSRS _____

OTHERS (SPECIFY) _____

Welding Inspectors

Bruce L. Siehsen 1-17-86
NSRS DATE

FSR

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS

TRANSMITTAL NUMBER TS0237

ERT has received the Employee Concern identified below, and has assigned the indicated category and priority:

Priority: 3

Concern # WI-85-081-010

Category: 86

Confidentiality: NA_ YES NA_NO(I&H)

Supervisor Notified: _?_YES _?_ NO   NUCLEAR SAFETY RELATED ~~NO~~ YES BJS

Concern: CI stated that several welding inspectors stayed high on pot during the shift. CI declined to provide any additional information.

Construction Department concern.

No follow up required.

William ... 1/14/86

MANAGER, ERT   DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ✓ GENERIC INSPECTOR

NSRS/ERT ______

NSRS ✓ BJS

OTHERS (SPECIFY) OGC

Welding Inspector

Bruce ... 1-17-86

NSRS   DATE

P54

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50237

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern # WI-85-081-X06

Category: 88 Confidentiality: NA_ YES NA_NO(I&H)

Supervisor Notified: _?_YES _?_ NO NUCLEAR SAFETY RELATED YES_

Concern: Weld records were falsified. CI declined to provide additional information.

Construction Department concern.

No follow up required.

William A. Crist 1/14/86
MANAGER, ERT DATE

NSRS has assigned responsibility for investigation of the above concern to:

ERT ___

NSRS/ERT _____

NSRS ___✓___ G&G (See WI-85-081-005)

(OTHERS (SPECIFY) OGC

Bruce L. Lofton 1-17-86
NSRS DATE

welding Document

PSR

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50252

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1

Concern #WI-85-086-003

I-86-161-WBN

Category: 62

Confidentiality:___Yes____No(I&H)

Supervisor Notified:____Yes__X_No

Nuclear Safety Related_YES_

Concern: TVA IS PROPOSING TO DECENTRALIZE THE QUALITY AUDIT PROGRAM WITHOUT PRIOR APPROVAL OF THE NRC. THIS IS A VIOLATION OF 10 CFR 50.54 AND THE SAFETY ANALYSIS REPORT. NUCLEAR POWER CONCERN. NO FURTHER INFORMATION IN FILE.

[signature] JAN 20 1986

Manager, ERT Date

NSRS has assigned responsibility for investigation of the above concern to:

ERT_______

NSRS/ERT_______

NSRS___✓___ x1

OTHERS (SPECIFY)________________________________

QA Effect

[signature] 1-22-86

NSRS Date

PSR

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS

TRANSMITTAL NUMBER T50252

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1

Concern #WI-85-086-004

Category: 5

Confidentiality:___Yes____No(I&H)

Supervisor Notified:____Yes__X_No

Nuclear Safety Related_YES_

Concern: CI STATED THAT THE PROPOSED DECENTRALIZATION OF THE QUALITY AUDIT PROGRAM IS AN ATTEMPT BY UPPER MANAGEMENT TO REDUCE THE EFFECTIVENESS OF THE INTERNAL AUDIT PROCESS AND AN EFFORT TO REDUCE THE MORALE, SECURITY, FREEDOM, AND EFFECTIVENESS OF THE AUDIT PERSONNEL. NUCLEAR POWER CONCERN. NO FURTHER INFORMATION IN FILE.

Quality Audit PROGRAM

William A Mehan JAN 20 1986

Manager, ERT Date

NSRS has assigned responsibility for investigation of the above concern to:

ERT___✓___ Ref WI-85-056-002

NSRS/ERT_____

NSRS_____

OTHERS (SPECIFY)_____

QA Effort

Bruce L. Simpson 1-22-86

NSRS Date

P34

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS

TRANSMITTAL NUMBER T50252

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1

Concern #WI-85-090-001

Category: 5

Confidentiality:___Yes____No(I&H)

Supervisor Notified:____Yes__X_No

Nuclear Safety Related_YES_

Concern: THE OBJECTIVE, AND RESULT OF, THE DISSOLUTION OF THE OFFICE OF QUALITY ASSURANCE WAS TO CONCENTRATE THE QA FUNCTION UNDER LINE MANAGEMENT. THE SITE QA MANAGER WILL REPORT TO THE SITE DIRECTOR RATHER THAN TO A CENTRAL QA DIRECTOR. THIS DESTROYS THE INDEPENDENCE OF THE QA AND AUDIT FUNCTIONS, AS THERE IS NO INDEPENDENCE FROM LINE MANAGEMENT. NUCLEAR POWER DEPARTMENT CONCERN. NO FURTHER INFORMATION IN FILE. CI REQUESTS THIS CONCERN TO BE INVESTIGATED BY QTC.

Off Qual Assurance

William [signature] JAN 20 1986

Manager, ERT   Date

NSRS has assigned responsibility for investigation of the above concern to:

ERT__✓__ see WI-85-095-004

NSRS/ERT_______

NSRS________

OTHERS (SPECIFY)____

[signature] 1-22-86

NSRS   Date

QA Effort

P3K

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS

TRANSMITTAL NUMBER T50252

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1

Concern #WI-85-090-002

Category: 5

Confidentiality:___Yes____No(I&H)

Supervisor Notified:____Yes__X_No

Nuclear Safety Related_YES_

Concern: DECENTRALIZATION OF THE OFFICE OF QUALITY ASSURANCE AGGRAVATES AN ALREADY MARGINAL TREATMENT OF CONFIGURATION MANAGEMENT. TVA LINE MANAGEMENT HAS NO CONCEPT OF THIS FUNCTION, AND DOES NOT INTERRELATE THE REQUIREMENTS OF 10 CFR 50, APPENDIX B, CRITERIA III, IV, VI AND VII. NUCLEAR POWER DEPARTMENT CONCERN. NO FURTHER INFORMATION IN FILE. CI REQUESTS THIS CONCERN TO BE INVESTIGATED BY QTC.

[signature] JAN 20 1986

Manager, ERT Date

NSRS has assigned responsibility for investigation of the above concern to:

ERT___✓___

NSRS/ERT_______

NSRS________

OTHERS (SPECIFY)____

QA Effect

[signature] 1-22-86

NSRS Date

PSR

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50244

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern #XX-85-027-009

Category: 87 Confidentiality:___Yes____No(I&H)

Supervisor Notified:__X_Yes___No Nuclear Safety Related_YES_

Concern: SEQUOYAH - CI CONCERNS WERE NOT ADEQUATELY ADDRESSED BY TVA. DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. NO FURTHER INFORMATION MAY BE RELEASED. CI HAS NO FURTHER INFORMATION.

Gen/concern addressed

William [signature] JAN 16 1986
Manager, ERT Date

NSRS has assigned responsibility for investigation of the above concern to:

ERT ✓

NSRS/ERT______

NSRS________

OTHERS (SPECIFY)________________________________

[signature] 1-21-86
NSRS Date

FSR

EMPLOYEE CONCERN ASSIGNMENT REQUEST

TO: Director - NSRS TRANSMITTAL NUMBER T50244

ERT has received the Employee concern identified below, and has assigned the indicated category and priority:

Priority: 1 Concern #XX-85-027-010

Category: 87 Confidentiality: ___Ye ___No(I&H)

Supervisor Notified: ____Yes_X__No Nuclear Safety Related_YES_

Concern: SEQUOYAH - CI CONCERNS WERE NOT ADEQUATELY ADDRESSED BY THE NUCLEAR REGULATORY COMMISSION. DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. NO FURTHER INFORMATION MAY BE RELEASED. CI HAS NO FURTHER INFORMATION.

W Thomas Lashen JAN 16 1986

Manager, ERT Date

NSRS has assigned responsibility for investigation of the above concern to:

ERT_____

NSRS/ERT_____

NSRS_____

(OTHERS (SPECIFY) NRC

Regulator Effect

Bruce L Siefken 1-21-86

NSRS Date

TVA 64 (OS-9-65) (OP-WP-5-85)

NRC

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO: W. T. Cottle, Site Director, Watts Bar Nuclear Plant

FROM: K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

DATE: JAN 17 1986

SUBJECT: CORRECTIVE ACTION RESPONSE EVALUATION

REPORT NO. : I-85-110-WBN

SUBJECT : TYPICAL HANGER DRAWING NOTES - "50 NOTES"

CONCERN NO.: IN-85-024-001

( ) ACCEPT (X) REJECT

1. I-85-110-WBN-01 "47A050 Notes"

   NSRS accepts OC's response to this recommendation.

2. I-85-110-WBN-02-47A050 "Hanger Reinspection"

   NSRS notes that the requested evaluation was not done but that instead a different sample of hangers was reinspected by QC group leaders. This effort identified problems with three of the twenty hangers inspected, with one of the noted conditions classified as unacceptable. The response does not indicate what corrective actions, if any were taken to correct the noted deficiencies. Also not addressed are the problems with the hangers INPO reinspected with assistance from QC. Please revise your response to include addressing these areas.

for K. W. Whitt

BFS:GDM
cc (Attachment):
R. P. Denise, LP6N35A-C
D. R. Nichols, E10A14C-K
QTC/ERT, CONST-WBN
E. K. Sliger, LP6N48A

Principally prepared by Bruce F. Siefken.

8701302U

TVA 64 (08-9-85)

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO : K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

FROM : W. T. Cottle, Site Director, Watts Bar Nuclear Plant P&E (Nuclear)

DATE : JAN 09 1986

SUBJECT: WATTS BAR NUCLEAR PLANT - RESPONSE TO NUCLEAR SAFETY REVIEW STAFF (NSRS) INVESTIGATION REPORT NUMBER I-85-110-WBN (EMPLOYEE CONCERN NUMBER IN-85-024-001)

Attached is our response to the recommendations contained in Nuclear Safety Review Staff (NSRS) investigation report number I-85-110-WBN. The attachment was previously provided to your staff on an informal basis.

If you have any questions, please contact W. L. Byrd at 3774, Watts Bar Nuclear Plant P&E (Nuclear).

W. T. Cottle

WLB:SRS:NC
cc (Attachment):
J. C. Standifer, Watts Bar Engineering Project, P-104 SB-K

This memorandum was principally prepared by S. R. Stout.

JAN 10 '86

(1) JAN

(2)

WATTS BAR NUCLEAR PLANT
NSRS INVESTIGATION REPORT NUMBER I-85-110-WBN
EMPLOYEE CONCERN NUMBER IN-85-024-001
TYPICAL HANGER DRAWING NOTES - "47A050 NOTES"

Recommendation I-85-110-WBN-01 "47A050 Notes

Conclusion

The employee concern is substantiated since considerable confusion and differing interpretations of the 47A050 notes exist.

Recommendation

NSRS recommends that the 47A050 notes be clarified to remove perceived ambiguities. This should be a joint effort between the Quality Control (QC) units, the engineering units, and Engineering (OE).

Response

A major review and revision of the 47A050 notes has been completed as a joint effort of OE, Construction (OC) and Nuclear Power. This review also took into account similar findings from INPO items DC.5-2 and QP.3-1. The following items have been completed to accomplish this revision.

1. OC Hanger Engineering Unit coordinated the collection of all comments concerning the 47A050 notes onsite. Comments were requested and received from the following OC units that use the 47A050 notes: Hanger Engineering, Instrumentation Engineering, Electrical Engineering, and Hanger Quality Control.

2. An onsite meeting was held between OE and OC where a preliminary set of marked-up notes was prepared for further review.

3. The set of marked-up notes was reviewed and comments were solicited from the OC units above along with following OE organizations: WBEP Support Design Sections 1, 2, and 3, CEB Central Staff, Division of Engineering and Technical Service Staff. In addition, comments were received from WBN Project Manger's Office and Nuclear Power WBN Site Modifications.

4. The comments were incoporated into the notes and a revised set of drawings produced by OE's CASD system for final review.

5. A final review was held onsite with all site participants and some additional modifications identified, particularly the addition of a new section containing only inactive notes.

6. The final modifications were drafted and reviewed per OEP-10.

7. The final revisions were issued September 10, 1985.

This revision resulted in 138 active notes and 20 inactive notes on 59 currently used pages.

Detailed training on the use of the 47A050 notes has been completed for all OE pipe support designers. Onsite training, coordinated by QC HEU, for all QC Engineering, Quality Control, and craft personnel engaged in hanger construction has been completed. Nuclear Power Modifications is also participating in the onsite training.

In addition, a special review group has been formed of OE and QC members to resolve and expedite any further questions or concerns on the 47A050 series of general hanger notes.

Recommendation I-85-110-WBN-02 "47A050 Hanger Inspection"

Conclusion

The 47A050 notes have contributed to an apparent lack of quality in hanger installation as evidenced by the reinspection rejection rate found by INPO. This is particularly disturbing since IEB 79-14 reinspections have previously been made.

Recommendation

NSRS recommends that the hangers rejected in the INPO reinspection be examined to determine the reasons for rejection and that the results of this examination be used to determine if a more general hanger inspection effort is warranted. This item should be evaluated for reportability to the NRC.

Response

The hangers inspected by INPO were for unit 2 of the plant and had not been inspected for IEB 79-14 as stated in the above conclusion. Only unit 1 has had a 79-14 inspection. A 79-14 inspection program is scheduled to be conducted later on unit 2.

QC has performed a reinspection of an additional 20 hangers that had been previously QC inspected. The results of this reinspection is contained in the attached informal memo to Shelton Johnson from Roy D. Anderson. As a result of this reinspection and the INPO inspections, the following response to INPO Finding QP.3-1 will add strength to the existing inspection program:

Response to INPO Finding QP.3-1

Management believes that the final hardware product produced at Watts Bar meets design requirements. However, it is also recognized that there is inconsistency among inspectors, resulting in problems of missed defects and acceptance criteria interpretation. Any missed defects or incorrect acceptance criteria identified has always and will continue to be evaluated under QC and QE programs for Conditions Adverse to Quality as NCRs, PIRs, or SCRs. Plans to reduce inspector inconsistency are being formulated and will include the following actions:

a. A program will be developed to provide interpretation of acceptance criteria when an inspector has a question.

b. Inspection supervisors/group leaders will become more involved in field activities by reinspecting a percentage of the completed features finalized by their unit each week. This reinspection will be planned so that each inspector's work is examined regularly and problems found will be discussed with the responsible inspector.

c. Inspection supervisors will require their personnel to identify acceptance criteria problems and to process those requiring interpretation through the program developed in "a."

d. Inspection supervisors will reemphasize following of procedures to their employees. Inspectors who regularly do not follow procedures should be identified under "b" so appropriate action can be taken.

e. Inspector trainig will be strengthened as determined by findings in "a" through "d."

Also, the revisions completed for the 47A050 notes have more clearly defined exact requirements for QC inspections which should help in preventing this problem from recurring.

In addition, a special review group has been formed of QE and QC members to resolve and expedite any future questions or concerns on the 47A050 series of general hanger notes.

Based on the types of problems identified with these conditions, none were of the magnitude that would cause failure to such a degree that the support would not perform its intended safety function.

C CW 7/10/85

WATTS BAR NUCLEAR PLANT
TVA
INFORMAL MEMO

TO: Shelton Johnson, Quality Manager, Watts Bar Nuclear Plant QC

FROM: Roy D. Anderson, Assistant Quality Manager, Watts Bar Nuclear Plant QC

DATE: July 9, 1985

SUBJECT: WATTS BAR NUCLEAR PLANT - HANGER SAMPLING AS RESULT OF THE INPO EVALUATION

During the week of June 24 through June 28, 1985, 20 recently inspected hangers were reinspected by the group leaders to determine if problems found by the INPO evaluators were still occuring on recent inspections.

Listed below are 20 engineered hangers reinspected. Note also the number of different parmeters which must be checked.

1. 2063-A435-16-7 (good)

   9 dimensions, 4 clearance measurements, 3 welds (size, overlap, undercut porosity, slag, arc strikes, splatter, etc.) for all welds. Verify ID tag, location in accordance with ISO.

2. 2063-A435-13-67 (good)

   45 dimensions, 7 welds, 4 clearances, location in accordance with ISO. (Clearance 1/32 less than tolerance 1/16 to 5/32, 120 degrees operating temperature clearance can be daylight).

3. 2063-A435-13-72 (good)

   24 dimensions, 5 welds, 3 clearances, location in accordance with ISO.

4. 2063-2-63-036 (good)

   48 dimensions, 7 welds, 4 clearances, location in accordance with ISO.

5. 2063-2-63-035 (good)

   38 dimensions, 4 welds, safety wire snubber, torque bolts, cycle snubber, check washers, pin size in each and location in accordance with ISO.

6. 2063-A435-12-9 (good)

   23 dimensions, 2 welds location in accordance with ISO.

Shelton Johnson

July 9, 1985

WATTS BAR NUCLEAR PLANT - HANGER SAMPLING AS RESULT OF THE INPO EVALUATION

7. 2063-A435-12-32 (good)

30 dimensions, 5 welds, 3 clearances (top clearances less than tolerance minus 1/8; plus 1/2, but clearance is good in accordance with temperature of 120 degrees and movement of hanger A435-12-77 which attaches to this hanger is 1/8-inch in opposite direction)

8. 2062-2-62A-713 (good)

34 dimensions, 6 welds, 2 clearances, location in accordance with ISO.

9. 2062-2-62A-714 (good)

35 dimensions, 6 welds, cycle snubber, verify washers and pin diameter, L dimensions, torque bolts and safety wire, S/N, movement.

10. 2063-A435-16-44 (two problems)

34 dimensions, 9 welds, 8 clearances, hanger found to be swapped with hanger 47A435-16-8. Both hangers are the same type. Located 11-9/16 inches on either side of AZM 289 degrees and 30 minutes. The drawing for FCR H-13654 for attaching to building steel was also wrong.

11. 2063-A435-13-66 and FCR H-13758 (one problem)

1) Anchor violation on FCR was not correct the 3-3/4 inch dimension should be 2-7/8 inches and the dimension not shown should be 3-3/4 inches for the anchor to free edge violation

37 dimensions, 8 welds, 3 clearances, hanger location in accordance with ISO.

Shelton Johnson

July 9, 1985

WATTS BAR NUCLEAR PLANT - HANGER SAMPLING AS RESULT OF THE INPO EVALUATION

12. 2063-A435-3-11 R1 and FCR M-13980 (good)

20 dimensions, 2 welds, verify correct clamp, end attachment, strut, type washers at each end and gap between the ears. Hanger location in accordance with ISO.

Verified bolt to bolt G32 anchor violtions in accordance with EP FCR with 9 additional dimensions.

13. 2063-2-63-526 R901 and FCR M-13741 (good)

24 dimensions, 2 welds, 2 offset angles and dimensions, cycle snubber, verify washers and pin diameter both ends, correct end attachments, correct clamp, verify correct movement and "L" dimensions, torque bolts and verify lock-tight or safety wire as required for snubber, record correct type, size and S/N for snubber. Hanger location in accordance with ISO.

14. 2062-62-2CVC R17 R902 and FCR M-14302 (good)

34 dimension, 4 welds, verify correct clamp, strut, end attachment, type washers at each end, pin diameter, gap between the ears, hanger location in accordance with ISO.

15. 2062-A406-12-64 R1 and FCR M-13723 (two problems)

Unacceptable condition

1) There was a washer for a base plate bolt that was loose. The bolt was tight and appeared to be flush with washer and plate. Note we are only required to check one bolt in accordance with base plate for thread engagement the one loose washer was hard to detect.

2) 1-1/8 inches and 1-1/2 inches edge distance shown on FCR is reversed and 7 inches dimensions should be 6 inches.

Shelton Johnson

July 9, 1985

WATTS BAR NUCLEAR PLANT - HANGER SAMPLING AS RESULT OF THE INPO EVALUATION

38 dimensions, 6 welds, 3 clearances, hanger location in accordance with ISO.

FCR redesigned hanger completely and covered C32 anchor to anchor violations with an additional 20 or more dimensions to verify.

16. 2063-A060-63-40 R0 and FCR H-12912 (good)

48 dimensions checks, 11 welds, location in accordance with "A"-size drawing.

17. 2063-2-63-034 R902 and FCR H-14688 (good)

30 dimensions check, 2 welds, verify snubber, type wash, correct pin diameter and end attachment, cycle snubber, verify correct movement and "L" dimension, torque bolts and verify lock-tight or safety wire as required for snubber, record correct type, size and S/N for snubber hanger location in accordance with ISO.

18. 2063-A435-13-B R2 and FCR H-14716 (good)

24 dimensions checks, 2 welds, verify correct clamp size, torque unistrut clamp (10A) attachment bolts, verify location in accordance with "A" size dwg.

19. 2063-A435-12-86 R0 and FCR H-14555 (good)

21 dimensions, 8 welds, 4 clearances, verify clamp type and size, location in accordance with ISO.

20. 2063-A435-12-90 R0 and no FCR (good)

16 dimensions, 5 welds, 3 clearances, location in accordance with ISO.

5

Shelton Johnson

July 9, 1985

WATTS BAR NUCLEAR PLANT - HANGER SAMPLING AS RESULT OF THE INPO EVALUATION

Note: Any hanger that has anchors will have holes in baseplates and thread engagement checks and gap behind plates must be checked. Any washers added to plates for oversize holes will have to be checked (dimensions and welds). ID tags are required for all hangers. These type measurements were not counted on this walkdown.

Roy D. Anderson

RA:RM

TVA 64 (OS-9-65) (OP-WP-5-85)

NRC

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO: W. T. Cottle, Site Director, Watts Bar Nuclear Plant

FROM: K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

DATE: JAN 17 1986

SUBJECT: CORRECTIVE ACTION RESPONSE EVALUATION

REPORT NO. : IN-85-514-001

SUBJECT : RESTRICTED DRAIN LINES

CONCERN NO.: IN-85-514-001

(X) ACCEPT ( ) REJECT

Please keep NSRS informed of the resolution of PIR WBNNEB8532 and notify NSRS when all corrective actions have been completed.

K. W. Whitt

BFS:JTH
cc (Attachment):
R. P. Denise, LP6N35A-C
D. R. Nichols, E10A14C-K
QTC/ERT, CONST-WBN--For response to employee.
E. K. Sliger, LP6N48A
W. F. Willis, E12B16 C-K (4)

Principally prepared by Bruce F. Siefken.

0297U

TVA 64 (05-9-65)

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO : K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

FROM : W. T. Cottle, Site Director, Watts Bar Nuclear Plant P&E (Nuclear)

DATE : JAN 08 1986

SUBJECT: WATTS BAR NUCLEAR PLANT - RESPONSE TO EMPLOYEE CONCERN INVESTIGATION REPORT IN-85-514-001 (EMPLOYEE CONCERN IN-85-514-001)

Transmitted herein is P&E Nuclear's response to recommendation Q-85-514-001-01 and contained in Nuclear Safety Review Staff (NSRS) employee concern investigation report number IN-85-514-001.

If you have any questions, please contact W. L. Byrd at 3774, Watts Bar Nuclear Plant P&E (Nuclear).

W. L. Byrd for
W. T. Cottle

WLB:RDA:NC
Attachment

This memorandum was principally prepared by R. D. Anderson.

JAN 9 '86

Routing		Noted
	Whitt	
①	MAH	
	LML	
	BJN	
	WCS	
	JTH	
	JRG	
	TARG	
	FILE 9TH	

Concern: IN-85-514-001, "Restricted Drain Lines"

The 1/4" drain lines installed in system 276 could restrict the flow of radioactive water due to bend radius violations and improper tube cutting problems. The drain system will not function as designed and an individual cutting into a hot system could become contaminated. Also, there are no QC hold points specified to inspect for these items.

Q-85-514-001-01

Paint and flamastic on tubing was documented by NCR 6321 R0 which was submitted to OE for evaluation. Subsequent review revealed that the operating temperature for system 62 (the process header feeding system 43) and system 43 both have operating temperatures of 137 degrees F. Thus, subassembly 1-043-L206-0002 (the tubing to 1-PCV-43-42) does not require cleaning. Cleanliness drawing 47W625-8C, which required this subassembly to be externally cleaned and swiped, will require revision to correctly indicate lines requiring cleaning.

Instrument tubing for 1-PC-43-43 with loose support clamps was answered in response to concern IN-85-016-003.

The foreign material identified on NCR 6321 has been specifically identified as Smoothkote Hydraulic Setting Insulation Cement and Dow Corning 3-654B silicone RTV foam. Preproduction lots of Smoothkote were qualified to regulatory guide 1.36 and shown to have very low halogen content. The Smoothkote manufacturer recently provided a letter from Insulation Industries, Inc., to North Bros., Inc., dated November 15, 1985 (B44 851125 504, Attachment 2), stating that Smoothkote meets reg. guide 1.36. However, the material lots used at WBN were not similarly qualified by the chemical analysis required by reg. guide 1.36. PIR WBNNEB8532 (B45 851122 852) has been written concerning the lack of chemistry qualification for Smoothkote. Through the correction method of this PIR, we will determine if the Smoothkote can in fact be qualified. Based on preproduction qualification testing, we expect this to be no problem. A sample has been taken from four bags of Smoothkote used at WBN and submitted to Singleton Labs for chemical analysis.

The RTV foam sealant is used as a firestop material around carbon steel and stainless steel piping in wall penetrations. Thus, its chemistry is controlled to very low levels of halogens per the letter provided by the manufacturer to TVA (MEB 841120 503, attachment 3). Therefore, there should be no need to remove either of these materials.

IN-85-514-001-02

This condition is being addressed in the response to concern IN-85-195-001.

TVA 64 (OS-9-65) (OP-WP-5-85)

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

NRC

TO: W. T. Cottle, Site Director, Watts Bar Nuclear Plant

FROM: K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

DATE: JAN 17 1986

SUBJECT: CORRECTIVE ACTION RESPONSE EVALUATION

REPORT NO. : I-85-541-WBN

SUBJECT : DESIGN ADEQUACY OF SEISMIC ANCHORS

CONCERN NO.: EX-85-039-003

(X) ACCEPT ( ) REJECT

Response accepted without comment.

K. W. Whitt

JCC:JTH
cc (Attachment):
R. P. Denise, LP6N35A-C
D. R. Nichols, E10A14C-K
QTC/ERT, CONST-WBN--For response to employee.
E. K. Sliger, LP6N48A
W. F. Willis, E12B16 C-K (4)

Principally prepared by J. C. Catlin.

0299U

TVA 14 (05-9-65)

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO : K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

FROM : W. T. Cottle, Site Director, Watts Bar Nuclear Plant P&E (Nuclear)

DATE : JAN 13 1986

SUBJECT: WATTS BAR NUCLEAR PLANT - RESPONSE TO EMPLOYEE CONCERN INVESTIGATION REPORT I-85-541-WBN (EMPLOYEE CONCERN NUMBER EX-85-039-003)

Attached is our response to the recommendations contained in Nuclear Safety Review Staff (NSRS) report number I-85-541-WBN.

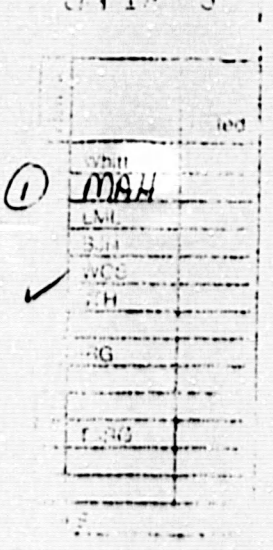
If you have any questions, please contact W. L. Byrd at 3774, Watts Bar Nuclear Plant P&E (Nuclear).

W. L. Byrd for
W. T. Cottle

WLB:SRS:NC
cc (Attachment):
J. C. Standifer, Watts Bar Engineering Project, P-104 SB-K

This memorandum was principally prepared by S. R. Stout.

JAN 16 '86



WATTS BAR NUCLEAR PLANT
RESPONSE TO NSRS INVESTIGATION REPORT NUMBER I-85-541-WBN
EMPLOYEE CONCERN EX-85-039-003

NSRS Recommendation

I-85-541-WBN-01 -- Generic Implications of Box Anchor Design Problem

Check for generic implications on design of box anchors for other TVA nuclear plants.

Response

A generic evaluation of this concern has been initiated. A potential generic condition evaluation memorandum (B41 851210 004) was sent for evaluation of Bellefonte, Browns Ferry, and Sequoyah Nuclear Plants. Any condition adverse to quality identified at those plants will be documented and resolved per existing procedures. (Note: Responses for Browns Ferry, B22 851224 019, and Bellefonte, B21 851220 001, have already verified that this concern is not applicable to those plants. Per B25 851220 302, Sequoyah Nuclear Power is still evaluating this condition for Sequoyah.)

TVA 64 (OS-9-65) (OP-WP-5-85)

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

NRC

TO: W. T. Cottle, Site Director, Watts Bar Nuclear Plant

FROM: K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

DATE: JAN 17 1986

SUBJECT: CORRECTIVE ACTION RESPONSE EVALUATION

REPORT NO. : I-85-383-WBN

SUBJECT : CONTROL OF USE OF TEFLON TAPE ON STAINLESS STEEL

CONCERN NO.: IN-85-977-001

( ) ACCEPT (X) REJECT

NSRS agrees with the course of action to be, however the response does not include the results of the generic evaluations as requested. Please forward these results to NSRS.

for K. W. Whitt

BFS:JTH

cc (Attachment):
R. P. Denise, LP6N35A-C
D. R. Nichols, E10A14C-K
QTC/ERT, CONST-WBN
E. K. Sliger, LP6N48A
W. F. Willis, E12B16 C-K (4)

Principally prepared by Bruce F. Siefken.

TVA 64 (OS-9-65)

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO : K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

FROM : W. T. Cottle, Site Director, Watts Bar Nuclear Plant P&E (Nuclear)

DATE : JAN 13 198[illegible]

SUBJECT: WATTS BAR NUCLEAR PLANT - RESPONSE TO EMPLOYEE CONCERN INVESTIGATION REPORT I-85-383-WBN (EMPLOYEE CONCERN NUMBER IN-85-977-001)

Attached is our response to the recommendations contained in Nuclear Safety Review Staff (NSRS) report number I-85-383-WBN.

If you have any questions, please contact W. L. Byrd at 3774, Watts Bar Nuclear Plant P&E (Nuclear).

W. L. Byrd for
W. T. Cottle

WLB:SRS:NC
cc (Attachment):
J. C. Standifer, Watts Bar Engineering Project, P-104 SB-K

This memorandum was principally prepared by S. R. Stout.

Whitt
LML
BJN
WCS
RG

WATTS BAR NUCLEAR PLANT
NSRS INVESTIGATION REPORT I-85-383-WBN
EMPLOYEE CONCERN IN-85-977-001

NSRS Recommendation

No action is required at Watts Bar Nuclear Plant.

I-85-383-WBN-01 - Applicability of NCR W-231-P to Other Plants

Reevaluate Watts Bar Nuclear Plant NCR W-231-P for generic applicability to Bellefonte, Sequoyah, and Browns Ferry; or provide justification for determination of not generic.

Response

A generic evaluation of NCR W-231-P for generic applicability to other plants has been initiated. A potential generic condition evaluation memorandum (B45 851217 269) was sent to Bellefonte, Browns Ferry and Sequoyah Nuclear Plants for their evaluation. Any condition adverse to quality identified at those plants will be documented and resolved per existing procedures at those plants.

TVA 64 (OS-9-65) (OP-WP-5-85)

UNITED STATES GOVERNMENT

Memorandum

NRC

TENNESSEE VALLEY AUTHORITY

TO: S. Schum, QTC/ERT Program Manager, Watts Bar Nuclear Plant

FROM: K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

DATE: JAN 17 1986

SUBJECT: TRANSMITTAL OF ACCEPTED FINAL REPORTS

The following final reports have been reviewed and accepted by NSRS and are transmitted to you for preparation of employee responses.

IN-85-278-001 (I-85-548-WBN)
IN-85-630-002 (I-85-534-WBN)

K. W. Whitt

Please acknowledge receipt by signing below, copying and returning this form to J. T. Huffstetler, E3B37 C-K.

NAME _____ DATE _____

GDM
Attachments
cc (Attachments):
R. P. Denise, LP6N35A-C
E. R. Ennis, WBN
D. R. Nichols, E10A14C-K
Eric Sliger, LP6N48A-C
W. F. Willis, E12B16 C-K (4)

0301U

TENNESSEE VALLEY AUTHORITY

NUCLEAR SAFETY REVIEW STAFF

NSRS INVESTIGATION REPORT NO. I-85-548-WBN

EMPLOYEE CONCERN IN-85-278-001

MILESTONE 6

SUBJECT: TRAINING AND SUPERVISION OF RECORDS REVIEW PERSONNEL

DATES OF INVESTIGATION: December 5-10 and 16-17, 1985

LEAD INVESTIGATOR: John Knightly — J. J. Knightly — 1/10/86 Date

INVESTIGATOR: A. M. Gentry — A. M. Gentry — 1-10-86 Date

REVIEWED BY: Jerry D. Smith — J. D. Smith — 1-10-86 Date

APPROVED BY: for W. D. Steam — M. A. Harrison — 1-13-86 Date

I. BACKGROUND

The Nuclear Safety Review Staff (NSRS) investigated Employee Concern IN-85-278-001 which the Quality Technology Company (QTC) had identified during the Watts Bar Employee Concern Program. The concern was worded:

> Review of plant records is accomplished by individuals who are inadequately trained and supervised, resulting in the potential for vital plant records to be inadvertently destroyed. Specific types of records indicated were Field Change Requests and Nonconformance Reports. CI would not provide any additional details/specifics. Constr. Dept. concern.

II. SCOPE

NSRS investigated the training and supervision of records review unit personnel and the reports of earlier completed NSRS and QTC investigations related to plant records review activities.

III. SUMMARY OF FINDINGS

A. The results of several NSRS and QTC investigations and previous audit findings concerning records review effectiveness are summarized in NSRS Investigation Report No. I-85-550-WBN. This report concluded that Construction review of incoming records since September 1983 appeared to have been generally thorough, whereas numerous instances of illegible, incomplete, or misplaced records had been documented prior to that time. Based on spot checks of current records checklists, records transmittal logs, and several categories of vault documentation, it was reported that problem records were being successfully identified during the records review process with subsequent correction by the submitting organizations. The retrieval of Field Change Requests (FCRs) and Nonconformance Reports (NCRs), as mentioned in the statement of concern, was found to be effective with 100 percent retrievability of the NCRs and FCRs selected at random for checking.

B. A separate Construction Records Review Unit with its own direct supervision was established in September 1983. At the time of this investigation the supervisor of the unit had six years' records review experience at Sequoyah and Watts Bar Nuclear Plants. Within the six-person unit, the key support personnel also had several years' records experience. The records review activities were found to be guided by records review checklists in accordance with Watts Bar Nuclear Plant Quality Control Instruction QCI-1.08, "Quality Assurance Records." Additionally, all review personnel had been required to demonstrate proficiency by passing tests over QCI-1.08 and QCI-1.40, "Records Accountability Program," prior to performing reviews.

As a point of information, during the time of this NSRS investigation, the separate Construction Records Review Unit was disbanded due to a Construction reduction in force (RIF). The records review activities were to continue within a combined Document Control Unit vault and records review organization. Evaluation of this new organization was not a part of the investigation's scope.

IV. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The review of plant records appears to be accomplished by individuals who are adequately trained and supervised. For recent and current records, the employee concern was not substantiated.

Recommendations

None.

TENNESSEE VALLEY AUTHORITY

NUCLEAR SAFETY REVIEW STAFF

NSRS INVESTIGATION REPORT NO. I-85-534-WBN

EMPLOYEE CONCERN IN-85-630-002

MILESTONE 6

SUBJECT: GROUNDWATER INLEAKAGE

DATES OF INVESTIGATION: December 11, 1985-January 7, 1986

INVESTIGATOR: T. O. Frizzell — Date: 1-15-86

REVIEWED BY: W. D. Stevens — Date: 1-15-86

APPROVED BY: for M. A. Harrison — Date: 1-15-86

I. BACKGROUND

NSRS has investigated Employee Concern IN-85-630-002 which was communicated to the Quality Technology Company (QTC) in response to the Watts Bar Employee Concern Program. The specific concern reviewed and discussed in this report was presented by QTC to NSRS as follows.

> Expansion joint seal between the reactor building and auxiliary building (Units 1 and 2), 692' elevation, leaks and permits seepage of ground water into building. Concern expressed is that this situation could also permit contamination of ground water system (Aquifer) if a radioactive liquid spill occurred in these buildings.

II. SCOPE

A. The scope of this NSRS investigation was defined by the concern of record which entails verification of expansion joint groundwater leaks in the specified areas and determination of the status of corrective action in the event the inleakage was substantiated. Also, monitoring and safeguard of the site's groundwater system were examined.

B. As a basis for investigation conclusions, reviews were made of the correspondence and other documentation associated with groundwater inleakage at WBN. Discussions were held with cognizant Office of Engineering (OE) and site Office of Construction (OC) personnel to assess the adequacy of plans and actions taken to resolve noted leakage areas. Interviews were also held with site Health Physics and Mechanical Maintenance personnel concerning the significance and resolution of groundwater inleakage. Finally, reviews were conducted of the WBN Radiological Environmental Monitoring Program as it related to the site's groundwater system. During the monitoring program review, interviews were conducted with personnel of the TVA Radiological Health Organization to obtain information regarding the program's structure and implementation.

III. SUMMARY OF FINDINGS

A. A review of correspondence between the WBN Construction Project Manager and the managers of the WBN design and engineering organizations revealed that groundwater leakage into the auxiliary building has been an identified problem since 1979. One area in particular that has been previously noted as an inleakage site is that which was discussed in the submitted employee concern. Specifically, groundwater seepage has been repeatedly observed and reported at the vertical expansion joints between the reactor and auxiliary buildings at elevation 692.

B. In discussions conducted with civil engineering personnel of the WBN Design Project, it was related that the design of the facility never intended to make the auxiliary building leakproof. However, it was stated that waterstops were installed in the noted expansion joints to prohibit or slow inleakage of groundwater. WBN engineering project personnel have documented that the identified leaks occur in a few areas where concrete was not thoroughly consolidated adjacent to the waterstop. Another documented possible cause of the inleakage is that the waterstops may be locally distorted or they may have relaxed so that they are not tightly wedged into the concrete.

C. In documented analyses of the small groundwater leaks identified, civil engineering personnel of OE had assessed that the seepage problem was not a condition adverse to quality. However, it was concluded that the areas leaking should be repaired to eliminate the leaks to the fullest extent practical. To support this effort, cognizant OE personnel have in the past conducted a study on materials and methods for grouting of active water leaks in concrete structures and have provided specific repair recommendations to the WBN Construction Project Manager. The Unit 1 and 2 leakage areas noted in the submitted concern are currently being repaired by the Construction Nuclear Services Branch (NSB) under Workplan 4976. This latest repair activity was initiated as a result of the issuance of Nonconformance Report NCR W-233-P by WBN NUC PR Mechanical Maintenance personnel.

D. Discussions held with the cognizant NSB civil engineer responsible for the leakage repair work verified that the OE-coordinated and -recommended plan was being implemented. Basically, the actual repair process involves replacement of the fiberglass material in the expansion joints with a pressure-injected chemical grout material. After determination of the leak's elimination, a foam backer rod and elastomeric sealant are applied to the joint. The NSB representative also related that Workplan 4976 would be held open until assurance of the adequacy of the repair work and that NSB would continue to monitor for new groundwater inleakage sites.

E. Regardless of the corrective actions being taken to resolve the identified groundwater inleakage areas, the basis for the submitted concern appears to be related to the plant's potential adverse affect on the local groundwater system (aquifer). As such, this NSRS concern investigation also included a review of the WBN site geology and the implementation of activities associated with radiological monitoring of the groundwater system. The results of that review are as follow.

1. Geologic formations of this region consist of dolomite, limestone, shale, and sandstone. Regionally, few of the shale formations and none of the sandstone formations have significant groundwater potential. The most significant water-bearing formation in this region is the "Knox Dolomite," in which water occurs in solutionally enlarged openings formed along bedding planes and fractures. This formation is the principal source of base flow to streams of the region and is the only significant aquifer. The formation underlies a 1- to 2-mile-wide belt 2-1/2 miles west of the WBN site at its nearest point; a narrow slice, the tip of which is about 1 mile north of the site; and a 1- to 2-mile-wide belt 1 mile east of the site and across Chickamauga Lake. Within a 2-mile radius of the plant, there is no use of the "Knox Dolomite" aquifer as a source of water to wells for other than small supplies.

2. The plant site itself is underlain by terrace deposits of gravel, sand, and clay, having an average thickness of 40 feet. Essentially, all of the groundwater under the site is in this deposit. Bedrock of the "Conasauga Shale" formation underlies the terrace deposit. WBN foundation exploration drilling and foundation excavation revealed that very little water occurs in the bedrock. Water occurs in the terrace deposit material in pore spaces between particles. The deposit is composed mostly of poorly sorted clay to gravel-sized particles and is poorly water bearing. All recharge to this groundwater system is from local precipitation. There is no regional subsurface transport of water to recharge the system, and all groundwater flow in the area of WBN has been shown to be toward Chickamauga Reservoir. There are no sources tapped for drinking or irrigation purposes between the plant and the reservoir. Since the lake and Yellow Creek form hydraulic boundaries on three sides to the site groundwater system and the ridge is a boundary to the north, it is not believed possible that any nearby offsite groundwater withdrawals could result in drawdown at the plant site.

3. Although the potential for the plant to affect groundwater users is very low because of it physical location, a network of observation wells has been established and will be maintained throughout plant life. One of the wells, which is in the near vicinity of the plant, is equipped with an automatic water sampler. Water from the automatic sampler is being analyzed monthly for radioactivity as required by plant procedures. In the remote event of the accidental release of radioactivity to the groundwater system, nearby groundwater users will be advised not to use their wells for drinking water until an investigation can be made of the extent, rate, and direction of movement of the radioactive material. These requirements are established in the WBN Final Safety Analysis Report (FSAR), and detailed information on the plant's radiological environmental monitoring program is contained in the WBN Offsite Dose Calculation Manual (ODCM).

IV. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

A. The submitted concern that points of groundwater inleakage exist in the expansion joints between the auxiliary and reactor buildings at the 692-foot elevation was substantiated. However, as detailed in this report, an NCR and workplan have previously been issued to address the leakage problem and actual repair work is in process. Additionally, the Construction Nuclear Services Branch and the NUC PR Mechanical Maintenance Section will continue to monitor for the adequacy of repair activities and the identification of additional or future inleakage points.

B. Due to the physical location and site geology of the WBN plant, it has been analyzed that the potential for operational activities to adversely affect the region's groundwater users is very low. However, to assure the protection of those users, WBN has established and implemented a program to routinely monitor the local groundwater system for radioactive materials. It should be noted that the plant's radiological environmental monitoring program is not restricted just to groundwater but includes the atmosphere, surface water such as the Chickamauga Reservoir, local drinking water, river sediment, milk from regional milking animals, fish, and food products grown in the area. It should also be noted that requirements are established and implemented to report the results of the monitoring program to the Nuclear Regulatory Commission, and TVA's Division of Quality Assurance conducts annual audits of the program to assure adequacy and verify compliance with program criteria.

Recommendations

None.

TVA 64 (OS-9-65) (OP-WP-5-85)

NFC

UNITED STATES GOVERNMENT

Memorandum TENNESSEE VALLEY AUTHORITY

TO: W. T. Cottle, Site Director, Watts Bar Nuclear Plant

FROM: K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

DATE: JAN 17 1986

SUBJECT: CORRECTIVE ACTION RESPONSE EVALUATION

REPORT NO. : I-85-022-WBN

SUBJECT : ACCESS - INTAKE PUMPING STATION

CONCERN NO.: IN-86-291-007

(X) ACCEPT ( ) REJECT

Per telecon with R. C. Cutshaw 1-16-86, response is acceptable.

K. W. Whitt

BFS:JTH
cc (Attachment):
R. F. Denise, LP6N35A-C
D. R. Nichols, E10A14C-K
QTC/ERT, CONST-WBN--For response to employee.
E. K. Sliger, LP6N48A
W. F. Willis, E12B16 C-K (4)

Principally prepared by Bruce F. Siefken.

0300U

TVA 64 (OS-9-65)

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO : K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

FROM : W. T. Cottle, Site Director, Watts Bar Nuclear Plant P&E (Nuclear)

DATE : JAN 09 1986

SUBJECT: WATTS BAR NUCLEAR PLANT - RESPONSE TO EMPLOYEE CONCERN INVESTIGATION REPORT TRANSMITTAL

Transmitted herein is Public Safety's response to employee concern number IN-86-291-007 and recommendations contained in Nuclear Safety Review Staff (NSRS) employee concern investigation report number I-85-622-WBN.

If you have any questions, please contact W. L. Byrd at 3774, Watts Bar Nuclear Plant P&E (Nuclear).

W. L. Byrd for
W. T. Cottle

WLB:GAT:NC
Attachment

This memorandum was principally prepared by G. A. Trotter.

JAN 10 '86

January 3, 1986

W. T. Cottle, Site Director
Watts Bar Nuclear Plant P&E (Nuclear)

WATTS BAR NUCLEAR PLANT - RESPONSE TO EMPLOYEE CONCERN NUMBER IN-86-291-C07

In the above referenced concern, it was stated that there was a 40-minute delay clearing personnel through security at the Intake Pumping Station (IPS) during a flooding condition in May/June 1985.

This particularly identified concern does not appear to be substantiated for the May/June 1985 time period. The basis for this statement revolves around a discussion held over the phone with the responding operations personnel. The operations personnel talked with on January 2, 1986 was Tom Wallace, who at the time of the incident was an Assistant Shift Engineer (ASE). During our conversation, Mr. Wallace could not specifically identify the date of the incident but stated it was one or two weeks after security had been established for the second time at the IPS. According to information contained in the NSRS Investigation Report No. I-85-622-WBN, this would have occurred on May 8, 1985 (thus confirming the concern time period). Mr. Wallace further advised that Shift Engineer Stockdale was working at the time and that he sent him to the IPS to investigate. Mr. Wallace stated that the PSS Central Alarm Station (CAS) was contacted by phone and advised of the situation. Mr. Wallace further stated that he went directly to the IPS and was met by a Public Safety Officer at the gate (The officer was waiting on Mr. Wallace to arrive). Mr. Wallace explained that there was no delay experienced in entering the IPS, and that the PSS officer escorted him at all times. The PSS Officer utilized his card key to provide entry into the building properly. In conclusion, under normal circumstances during this period of time (May/June 1985), an individual requiring entry into the IPS would be subject to the provisions of WB 10.12. In this case, however, Mr. Wallace was not required to follow these normal procedures but was allowed unrestricted access into the IPS with the assistance of the Public Safety Service.

Even though it is felt that this particular concern is unsubstantiated, it is important to specifically, item-by-item, address the conclusion and recommendations identified in the previously mentioned NSRS investigation:

Item 1 - Reference Conclusions, A

> "...At times, there had been delays (of an undetermined length) in IPS routine access processing."

WATTS BAR NUCLEAR PLANT - RESPONSE TO EMPLOYEE CONCERN NUMBER IN-86-291-007

Response: When security was established at the IPS on January 28, 1985, our motor patrol officer had the responsibility to provide access control into the IPS. In addition, this officer was responsible for access control of vehicles into the Main Power Block Protected Area (MPBPA). Due to construction activities associated with vehicular entry into the railroad bay, delays into the IPS under normal circumstances were experienced. In an effort to correct this situation, the motor patrol officer was given primary responsibility for IPS entries while duties associated with entry into the MPSPA were given to other posts. This was done on March 6, 1985 through use of a "field note" to all PSS personnel. This action appears to have corrected delays in routine access processing into the IPS.

Item 2 - Reference Conclusions, C

The PSS IPS access instructions are not consistent in specifically addressing the IPS by name or defining that which constitutes an immediate/emergency access need. Those instructional oversights should be addressed for clarification and to avoid the possibility of confusion in an immediate/emergency access situation.

Response: Currently, emergencies such as fires and medical injuries are reported to the shift engineer (SE), using the plant phone system (8299). In addition, plant personnel are knowledgeable to contact the SE upon discovering unusual circumstances. It is recommended, with the concurrence of Operations and Plant Management, that WB 10.12 be revised to reflect use of the plant phone system to report unusual circumstances to the SE. If it is evaluated by the SE as a true emergency, the plant PA system may be utilized to generate proper PSS response to the IPS. In addition, special measures for access under emergency conditions would be included in this revision. We would estimate completion of this revision by March 1, 1986.

Finally, in response to the NSRS Investigation under Recommendations, I-85-622-WBN-01 - Clarify Public Safety Service Instructions, a Section Instruction Letter (SIL) will be prepared detailing steps to follow to allow access into the protected areas during declared emergencies. It should be noted, however, that those liberties may not be extended for drill purposes due to requirements set forth by the NRC. This SIL would be prepared and distributed by April 1, 1986.

W. T. Cottle, Site Director
January 3, 1986

WATTS BAR NUCLEAR PLANT - RESPONSE TO EMPLOYEE CONCERN NUMBER IN-86-291-007

Richard L. Thigpen

RLT:TU

TVA 64 (OS-9-65) (OP-WP-5-85)

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO: S. Schum, QTC/ERT Program Manager, Watts Bar Nuclear Plant

FROM: K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

DATE: JAN 22 1986

SUBJECT: TRANSMITTAL OF ACCEPTED FINAL REPORTS

The following final report has been reviewed and accepted by NSRS and is transmitted to you for preparation of employee response.

IN-85-230-WBN (IN-85-325-003)

for K. W. Whitt

Please acknowledge receipt by signing below, copying and returning this form to J. T. Huffstetler, E3B37 C-K.

NAME _____ DATE _____

JTH
Attachments
cc (Attachments):
R. P. Denise, LP6N35A-C
W. T. Cottle, WBN
D. R. Nichols, E10A14C-K
Eric Sliger, LP6N48A-C

0303U

TENNESSEE VALLEY AUTHORITY

NUCLEAR SAFETY REVIEW STAFF

NSRS INVESTIGATION REPORT NO. I-85-230-WBN

EMPLOYEE CONCERN IN-85-325-003

MILESTONE 5

SUBJECT: EXCESSIVE PIPING VIBRATION

DATES OF INVESTIGATION: January 9-15, 1986

INVESTIGATOR: J H Kincaid — J. H. Kincaid — Date: 1/17/86

REVIEWED BY: for Barry Moore Holtowich — for P. R. Washer — Date: 1/17/86

APPROVED BY: for M A Stevens — M. A. Harrison — Date: 1-21-86

I. BACKGROUND

NSRS has investigated Emplovee Concern IN-85-325-003 which Quality Technology Company (QTC) identified during the Watts Bar Employee Concern Program. The concern is worded:

> During hot functional test, Unit #2, A 12" (approx) diameter pipe in the "mini-74" system, elevation 731", pipe chase #1, exhibited a rapid cyclical movement of 16-18" for an extended period of time. It was expressed that the movement was of sufficient frequency and amplitude to cause cyclical stress failure of pipe/welds. No further details are available.

II. SCOPE

The concern was determined to be that piping had vibrated at a level which could have caused a metal fatigue failure in the pipe. The piping described by the concerned individual (CI) was determined to be the RHR minimum flowline in Unit 1. "Mini-74" is part of the piping identification stenciled on the insulation of the 3-inch minimum flowline associated with the residual heat removal (RHR) pump. The line would appear much larger due to insulation. A callback to QTC established that Unit 2 was an error, and that it should have been Unit 1.

III. SUMMARY OF FINDINGS

The vibration described was assumed to be the same event reported by NSRS Investigation Report No. I-85-510-WBN (Employee Concern IN-85-289-002) based on evidence determined in that investigation. The 16-18-inch cyclical movement stated would not be possible unless a pipe support failed. There were no failed supports found or reported on the RHR minimum flowline. The findings for this investigation are the same as those reported for NSRS Investigation Report No. I-85-510-WBN.

IV. CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations are the same as those reported for NSRS Investigation Report No. I-85-510-WBN with the following addition which addresses the CI's concern about pipe/weld failures.

The event did not break supports on the RHR minimum flowline, and there was no evidence of permanent deformation. The event lasted approximately 15 minutes which was not of a long enough duration to initiate fatigue failure.

TVA 64 (OS-9-65) (OP-WP-5-85)

UNITED STATES GOVERNMENT

Memorandum TENNESSEE VALLEY AUTHORITY

TO: W. T. Cottle, Site Director, Watts Bar Nuclear Plant

FROM: K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

DATE: JAN 22 1986

SUBJECT: CORRECTIVE ACTION RESPONSE EVALUATION

REPORT NO. : I-85-248-WBN

SUBJECT : BOLT REPLACEMENT WELDING TO EMBEDDED PLATES

CONCERN NO.: IN-85-109-002

(X) ACCEPT ( ) REJECT

K. W. Whitt

BFS:JTH
cc (Attachment):
R. P. Denise, LP6N35A-C
D. R. Nichols, E10A14C-K
QTC/ERT, CONST-WBN
E. K. Sliger, LP6N48A

Principally prepared by Bruce F. Siefken.

0304U

TVA 64 (08-9-85)

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO : K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

FROM : W. T. Cottle, Site Director, Watts Bar Nuclear Plant P&E (Nuclear)

DATE : JAN 07 1986

SUBJECT: WATTS BAR NUCLEAR PLANT - RESPONSE TO EMPLOYEE CONCERN INVESTIGATION REPORT I-85-248-WBN (EMPLOYEE CONCERN NUMBER IN-85-109-002)

Attached is our response to the recommendations contained in Nuclear Safety Review Staff (NSRS) report number I-85-248-WBN.

If you have any questions, please contact W. L. Byrd at 3774, Watts Bar Nuclear Plant P&E (Nuclear).

W. L. Byrd for
W. T. Cottle

WLB:SRS:NC
cc (Attachment):
J. C. Standifer, Watts Bar Engineering Project, P-104 SB-K

This memorandum was principally prepared by S. R. Stout. ✓

✓

WATTS BAR NUCLEAR PLANT
NSRS INVESTIGATION REPORT NUMBER I-85-248-WBN
EMPLOYEE CONCERN IN-85-109-002

We have reviewed the subject investigation report and concur with the findings and recommendation.

Response to Recommendation I-85-248-WBN-001

Engineering (OE) has documented this item as a condition adverse to quality on Problem Indentification Report (PIR) WBNCEB8573. The recommended verification analysis to ensure that bolt-replacement welds are adequate will be completed as specified in the recommendation. The verification analysis will be tracked and documented by means of PIR WBNCEB8573, and will be completed by February 10, 1986.