3.9 Element - Corrective action for NDE programs

3.9.1 Issue - Notice of Indications (NOIs) discrepancies not repaired. (Site specific BFN) (XX-85-102-004)

Specific Evaluation

The investigation of the issue by QACEG included the review of the Nuclear Quality Assurance Manual, Part II, Section 5.1, Surveillance Inspection 4.6G, Revision 0, December 23, 1986, randomly selected NOI forms, and discussions were held with cognizant personnel (Inservice Inspection Supervisor).

Discussion

NOIs are unacceptable Nondestructive Examination (NDE) results reported by the Inservice Inspection (ISI) Group. Part I of the form is completed and signed by the NDE Level II or III individual who detected the indication. An ISI Group representative assigns a sequential number, reviews, and signs the form. The Nuclear Site Director's Organization is responsible for determining which organization shall prepare the problem disposition (Part II of the form) and perform the associated corrective action. The individual responsible for preparation of the disposition signs and dates Part II of the form. The cognizant supervisor of the organization designated to perform the corrective action reviews and approves the disposition and signs and dates Part II of the form.

Upon completion of the corrective action, the ISI Group representative verifies completion of corrective action; enters the work instruction and/or Design Change Request numbers on the NOI form, enters the examination report number, if reexamination was performed; and signs and dates Part III of the form. In all cases reviewed, indications were properly documented on part I of the form. Reexamination was properly documented on part III of the form including appropriate work instructions and/or design change request numbers. No attempt was made to check physical installations because no determination could be made on the ISI work by visual inspection.

Conclusion

The issue that defects discovered during inservice inspections are not being properly corrected could not be verified as factual (Class A).

The QACEC evaluation and a review of randomly selected NOI forms, examination reports, and reexamination reports, determined that NDE results are being reported and dispositioned in accordance with established site procedures.

3.10 Element - Discrepancy review for reportability

3.10.1 Issue - Downgrading the reportability status of significant NCRs (generic to WBN and BLN). (IN-85-110-002)

Specific Evaluation

This issue was evaluated at WBN and BLN. Procedure EN DES EP 1.26, "Nonconformances Reporting and Handling by EN DES," Revision 7, March 24, 1984, Revision 8, June 28, 1984 and Revision 9, March 15, 1985 (applicable at both plants) was reviewed. Also NCRs generated from April 3, 1984 to March 4, 1986 at WBN and from January 5, 1984 to June 18, 1985 at BLN were reviewed. QACEG also reviewed EN DES Procedure 2.02 Revision 9 03/15/85 "Handling of Conditions Potentially Reportable Under Title 10 of The Code of Federal Regulations, Parts 21, 50.36 and 50.55(e)" to determine notification requirements to the originating organization when an NCR is determined not reportable.

Discussion

At both WBN and BLN, TVA's Procedure EN DES EP 1.26, "Nonconformances Reporting and Handling by EN DES," Revision 7 dated 4/24/84, Revision 8 dated 6/28/84 and Revision 9 dated 3/15/85 assigns the responsibility for the determination of significance/nonsignificance of an NCR to the Branch Chief/Project Manager of the organization originating the NCR. Additionally, EP 1.26 states in part: "A significant NCR cannot be downgraded to nonsignificant." Random reviews were performed of approximately 60 significant NCRs issued between April 3, 1984 to March 4, 1986 at WBN and January 5, 1984 to June 18, 1985 at BLN. The results of the reviews revealed that minor changes were made to some NCRs, however, no changes were made which could be considered a violation of

procedure EN DES EP 1.26. EN DES EP 2.02 Section 6.1 Item 7 states in part "If the results of these evaluations lead to determinations, of nonreportability, requires no further action in reporting to the commission.

Copies of the documentation in step 7 should be provided to the brach, staff, or project which referred the nonconformance report to the NEB NLS; the appropriate design project; Power and Engineering (P&E) Project Manager; Records and Information Management Systems (RIMS); the Chairman of the Nuclear Safety Review Board; Office of Nuclear Power's Licensing Branch; and other organizatins, if affected."

QACEG verified through review of reportable and nonreportable NCR's that the organiating organization receives a copy of the documentation package that determines reportability.

Conclusion

Based on QACEG evaluation the issue is factually accurate but what it describes is not a problem (Class B). The originator of the NCR does not necessarily receive notification of reportability outcome. However, in accordance with EN DES Procedure E.P.2.02 the originating organization does receive this information. QACEG verified that reportable and nonreportable NCR determinations are distributed to the originating organization by hard copy, reguardless of the reportability outcome.

3.10.2 Issue - Reportable deficiencies not reported to the NRC, as required (Site-specific WBN). (WI-85-030-006)

Specific Evaluation

This issue was evaluated at WBN only. A review was conducted of the Nuclear Licensing Staff Procedure 35, Revision 1, September 23, 1982. Discussions were also held with the Principal Nuclear Engineer.

Discussion

The QACEG evaluation revealed that the Nuclear Licensing Staff is responsible for the reporting of significant design and construction deficiencies as required by 10 CFR 50.55(e) and Nuclear Licensing Staff Procedure number 35, Revision 1, dated September 23, 1982.

Paragraph 3(A) of Procedure 35 states in part: "An initial notification to the NRC Region II is required within 24 hours of the time a reportable deficiency is identified, and a follow-up written report is required within 30 days."

The CI reported that NCRs with similar deficiencies, subsequent to NCR 2111R, were not being reported to the NRC in accordance with the requirements of 10 CFR 50.55(e).

The Principal Nuclear Engineer provided evidence (TVA Significant Condition Report Processing Record Sheet, February 19, 1980) that the conditions described on NCR 2111R had been determined to be significant and reportable by TVA. The conditions were reported on February 20, 1980 via telephone to the NRC.

As a result of the initial telecon to the NRC on February 20, 1980, regarding NCR 2111R, other NCRs were being generated by TVA on other systems, with the same generic problem as NCR 2111R. These NCRs were evaluated for impact on quality and reported to the NRC via Interim Reports as required by Nuclear Licensing Staff Procedure Number 35, paragraph B.5.

Conclusion

The issue cannot be verified as factual based on discussions held with cognizant site personnel, and the documented evidence obtained during the QACEG evaluation (Class A). Since no procedure was violated and the Principal Nuclear Engineer provided evidence that the item was reported, no corrective action is required.

3.10.3 Issue - TVA does not inform NRC of deviations from codes of standards (HI-85-077-N20)

Specific Evaluation

The issue was evaluated at Watts Bar only. a review was conducted of a memorandum dated August 28, 1986, from R. C. Parker to George Toto and ML Rayfield RIMs number (T19860828 800), that was issued as the result of an independent review of TVA's compliance with the ASME III Program.

Discussion

The independent review of TVA's compliance with the ASME III program revealed the system 62 Volume Control Tank (VCT) number 450 was over pressurized to the point of deformation during hydrostatic testing. This tank is listed on TVA's N-5 data report 1-62-2/3-P1OR1 as complying with code as a result of a Westinghouse evaluation. However, since the tank yielded to the point of deformation, ASME III code compliance cannot be obtained in accordance with NB 6222. TVA did not initiate corrective action or notify NRC of the code deviation, therefore, QACEG issued CATD 80103-WBN-01.

Conclusion

The issue was found to be factual and presents a problem for which corrective action has been, or is being taken as a result of the evaluation (Class D) Tank number 450 was overpressurized to the point of deformation during hydrostatic testing but remained listed on TVA's N-5 Data Report as acceptable, TVA did not initiate corrective action or notify NRC of the code deviation.

Cause

The cause of the finding is attributable to managements failure to comply with code requirements and failure to initiate adequate corrective action.

Corrective Action

QACEG has issued CATD 80103-WBN-01 to identify that tank number 450 was overpressurized by hydrostatic testing but remained listed on TVA's N-5 Data report as acceptable. The response indicated that TVA will perform a stress analysis, update design drawings, supplement the N-5 data report, and submit a use as is disposition and justification to the NRC as an FSAR change. When the disposition and justification is found acceptable by the NRC, it will be incorporated into the WBN FSAR.

3.11 Element - Following/meeting nonconformance procedure

3.11.1 Issue - Inadequate reporting of NCRs/IRNs (Site-specific WBN) (IN-85-247-X03, IN-85-606-003, IN-86-255-003, IN-85-621-001, PH-85-038-002, and IN-85-671-002)

Specific Evaluation

The issue was evaluated at WBN only. A review of the implementing procedures and instructions; Administrative Instruction (AI)-2.8.3 "Nonconformances, 10 CFR 50, Appendix B" Quality Assurance Procedure QAP-15.1, "Reporting and Correcting Nonconformances" and QCI-1.02 "Control of Nonconforming Items" for the timeframe of January 1984 through the present was conducted. Discussions were held with an Authorized Nuclear Inspector, the Conditions Adverse to Quality Unit Supervisor and TVA QA Evaluators and N-5 Unit Personnel. Also a review was conducted by QACEG of NCRs within the timeframe of the concern. NSRS report I-85-443-WBN was also reviewed.

Discussion

The issue was based on instances where problems were not appropriately reported in accordance with governing procedures.

First, ASME code related NCRs were stated to be not identified as such thereby avoiding a review cycle.

The evaluation was conducted by checking NCRs to determine whether or not they were appropriately designated as being ASME code applicable. Two NCRs were noted which had originally been designated as not ASME Code applicable when they, in fact, were. However, they had been corrected before the evaluation and appropriately reviewed.

Second, it was stated that a supervisor was having NCRs routed to him prior to assigning the NCR control number in violation of QCI 1.02 requirements.

A review was performed of QCI-1.02 to determine the requirements for assignment of the NCR control number. This review indicated that the requirements, in QCI-1.02 were confusing and unclear, regarding the assignment of the NCR control number. It was unclear exactly who assigns the NCR control number and at what point. QAP 15.1, "Reporting and Correcting Nonconformances" and AI-2.8.3, "Nonconformances, and 10 CFR 50, Appendix B," were also reviewed. This review indicated that both procedures are inconsistent as they pertain to NCR processing and further confused the requirements for assigning the NCR control number. As a result of the procedural conflicts compliance was not consistent.

Lastly, it was stated that civil/structural inspectors were not issuing IRNs by just refusing to sign-off the inspection point. A review was performed of two NCRs, (3579R and 4093D), provided in NSRS report I-85-443-WBN. These NCRs indicated that inspections were not performed

and identified numerous noncompliances in the area stated by the CI. A review was also conducted of QCI-1.02-1, "Inspection Rejection Notice," Revisions 8 and 9, March 8, 1985 and September 27, 1985, respectively. Revision 8 procedurally allowed discrepant conditions to be undocumented as long as the condition was corrected prior to the inspector leaving the work area. This condition was corrected by Revision 9 which required all discrepant conditions to be documented. This portion of the issue was found factual. Corrective actions have been instituted by a procedure revision to QCI 1.02 1 which requires that each unsatisfactory condition be documented on an IRN.

Conclusion

The issue is factual and presents a problem for which corrective action has been, or is being, taken as a result of the evaluation (Class D). QCI-1.02, QAP-15.1 and AI-2.8.3 conflict with each other regarding requirements for processing NCRs, specifically for the assignment of the control number. These conflicts resulted in delays in the processing of NCRs.

Causes

The cause of the finding was attributed to notable inconsistency between WBN QAP 15.1 and QCI 1.02. Numerous inconsistencies are also evident between the QAP/QCI and the parallel document used by Office of Nuclear Power (ONP), AI-2.8.3.

Corrective Action

The Project Quality Assurance organization has been assigned responsibility for corrective action. The problem was attributed to procedural conflicts and CATD 80412-WBN 02 was issued. Specifically, procedures QAP-15.1, QCI-1.02 and AI-2.8.3 were noted to conflict regarding the processing of NCRs. AI 2.8.3 will be revised to provide a consistent format for documenting and processing CAQs. The NCR program will be replaced by this new corrective action program. QACEG has concurred with the CAP.

3.11.2 Issue - QA program limits inspectors in identifying nonconformances (generic WBN and SQN). (SQM-86 002-004, WI 85-004-001, XX-85-102-010, IN-85-251-002 and IN 85 472 002)

Specific Evaluation

The issue was evaluated at WBN, SQN, BFN and BLN.

At WBN, a review was conducted of the WBN Document Control Unit NCR log.

At BFN, the evaluation included a review of appendix B to 10CFR50, criteria XV and XVI; TVA Topical Report TVA-TR-75-1A, Revision 8 and 9; also discussions were held with two quality supervisors and two inspectors.

At BLN, a review was performed of QAP-15.1, "Reporting and Correcting Nonconformances," Revision 12, September 3, 1985; and the NQAM.

At SQN, the following documents were reviewed: Appendix B to 10 CFR 50; NQAM, December 23, 1985; Sequoyah Standard Practice SQM-2 "Maintenance Management System," Revision 14, July 17, 1985 through Revision 20, September 11, 1986; Quality Assurance Instruction Letter (QA-SIL), QA-SIL 16.1 "Corrective Action and Adverse Conditions," Revision 15, dated March 31, 1986 including previous Revision 13 and 14; QA SIL 18.1 "Surveys," Revision 11, dated, March 24, 1986 including previous Revision 6, 7, 8, 9, and 10; Division of Quality Assurance Instruction (DQAI), DQAI-5-2, "Surveillance Program" Revision 0, dated August 30, 1985 and Revision 1, dated August 29, 1986; Office of Engineering - Operation Instructions (OE-OI) OE-OI-3001, "Drawing Originals - Checking Out and Checking In," Revision 0; OE-OI-4001, "Contract Administration - Handling of Vendor Drawings," Revision 0; OE-OI-4003, "Prints and Microfilm - Routing Distribution," Revision 0; Engineering Office Administrative Instruction (SQNP) AI-08, "Drawing and Reproduction," September 10, 1985; AI-12, "Adverse Conditions and Corrective Action," August 2, 1985; and QC Observation Log Sheets.

Also, NSRS report I-86-185-SQN, March 5, 1986 and Generic Concern Task Force Report (GCTF) June 6, 1986 were reviewed.

In addition, at SQN, the evaluation process included discussions with the Quality Engineering/Quality Control (QE/QC) Manager, Office Supervisor Document Control - Nuclear Engineering, Quality Assurance (QA) Manager - Quality Assurance Group, Assistant Supervisor and the investigators identified in the NSRS and GCTF Reports, regarding the reporting and documenting of deviations.

Discussion

At BFN, a discussion with a Quality supervisor, on site at the time when the QA Program was being decentralized (Revision 8 of the TVA Topical Report) during 1984 and 1985 stated that he believed that Quality Control (QC) was understaffed and overworked supporting plant operations and maintenance during outages. Because of this, inspectors were told to look at only the work they were sent out to inspect.

Interviews with another Quality Supervisor and two QC Inspectors revealed that no written instructions exist or have existed at BFN which would limit or restrict reporting of nonconformances. However, QC inspectors stated they had been told by their supervisors that when they were sent out to perform inspections, to limit the inspection to the "scope" in the work package. Further investigation indicated no objective evidence to substantiate their statement.

Currently, inspectors are directed to issue a CAQ Report for any discrepant conditions they identify during their inspection.

At BLN, the evaluation indicated that procedural requirements were in place which mandated reporting a nonconformance by all personnel involved in any capacity. Also, NCRs were reviewed which had been generated by personnel not directly involved in that specific area.

This issue was also evaluated at WBN and SQN where it could not be verified as factual but as a result of the evaluations other problems were discovered for which corrective action was initiated, i.e. unsatisfactory work undocumented at WBN because of miscommunication and an unauthorized tracking log at SQN.

Conclusion

The issue itself could not be verified as factual but as a result of the evaluation, other problems were discovered for which corrective action was initiated (Class E). CATDs 80412 WBN 01 and 80402 SQN 01 were initiated for problems stated above. Although personnel interviews indicated that inspectors were limited in identifying problems, the evaluation indicated that further evaluation to research documentation which would support the interview information did not provide any objective evidence. Because of this and the lack of any other additional information, the concern has been determined to be not factual.

Causes

The causes of the problems were miscommunication at WBN and procedural noncompliance at SQN and were the responsibility of the respective site QA organizations.

The evaluation of the issue identified two different findings, one at WBN and one at SQN. At WBN, CATD 80412-WBN-01 identified a condition where nonconforming conditions were not properly documented, as required. At SQN, CATD 80402 SQN 01 was issued to identify the use of an unauthorized log.

Corrective Action

The responsibility for corrective actions has been assigned to the respective site QA organizations.

During the evaluations of this issue at WBN and SQN, problems, unrelated to the issue, were identified.

At WBN, two nonconforming conditions were not identified until three to six months after the initial realization that they were nonconforming. This problem was attributed to miscommunication. Inspectors accompanied QACEG on a surveillance of electrical supports and related equipment. The inspectors identified deficiencies and deviations that were nonconforming conditions but did not feel responsible for reporting problems identified during the survey QACEG issued CATD 80412-WBN-01. Under TVAs present environment

and charter, the inspector is responsible for identifying and reporting conditions adverse to quality. A portion of each inspector's week is spent by performing a general surveillance of their responsible areas and observing and reporting both good and adverse conditions. Observations such as these would be immediately reported. Sometime after these items were observed, Electrical Quality Control (EQC) was notified to follow-up on each of the items addressed during the QACEG surveillance. At that time, an indepth review and research of past documentation (variances, FCRs, NCRs memoranda, and procedural requirements) that was in effect at the time was performed to determine if every item addressed on the surveillance, was in fact a nonconforming condition. All items found and determined by EQC to be discrepant and/or deficient were addressed through NCRs. This response was in reply to CATD 80412 WBN-01 by WBN QA. QACEG has concurred.

At SQN, a CATD (80402-SQN-01) was generated regarding the use of an unauthorized tracking log. The CAP indicated that QA-SIL 10.7 was issued addressing the discrepancy. QACEG has concurred with the CAP.

3.12 Element - Procedure adequacy

3.12.1 Issue - Storage of NCR documents is inadequate, (Site specific WBN) (EX 85 177 001)

Specific Evaluation

The issue was evaluated at WBN and BLN. At WBN a review was conducted of QAP 15.1, WBN-QCI-1.02, and WBN-QCI-1.08, "Quality Assurance Records." Also a review was performed of NCRs stored at the Document Control Unit. At BLN, Document Control Unit-A-Filing Instruction (DCU-A-FI), DCU A FI 204, Revision 11 through 17, September 17, 1984 through March 19, 1986 were reviewed.

Discussion

At WBN, review of NCRs stored in the Document Control Unit (DCU) vault revealed that some NCRs have been submitted to the vault for storage before closure. In-process NCRs, found in the vault, were logged and stored after one of the following was completed:

a. Identification of the violation, apparent cause and after the initiator's supervisor indicated their approval (NCR Sections 1 and 2).

b. NCR sections 1 and 2 as noted in (a), above, and after identification of the method of correction, with approvals (NCR Sections 3 and 4).

The control of nonconformances is described in QAP-15.1, "Reporting and Correcting Nonconformances" and in WBN-QCI-1.02, "Control of Nonconforming Items." They

identify responsibilities for NCR issuance and sequence of action including distribution of NCRs while they are a working document. QAP 15.1 and WBN-QCI 1.02 do not specifically require vault storage of NCRs while they are working documents. The storage of NCRs is referenced as a requirement only after closure.

This issue was also evaluated at BLN. DCU-A-FI 204 provides specific instructions for in-process handling of NCRs in DCU. The procedure requires that an identifying number be assigned and a copy made by DCU of the NCR to protect against loss of the original. Based on the above, the issue could not be verified as factual, at BLN.

Conclusion

The issue is considered factual at WBN, but does not present a problem (Class B). At WBN, DCU maintains an NCR log which contains, as a minimum, information required in WBN-QCI 1.02 paragraph 5.5.1, including the NCR identifier and the initiator's unit designation. WBN-QCI-1.02 requires DCU to distribute NCRs to responsible individuals at certain times during the nonconformance reporting process. The in-process NCRs found in the vault were entered at the points of distribution referenced in WBN-QCI 1.02 paragraphs 6.1.4.2 and 6.1.10.

WBN-QCI-1.08, "Quality Assurance Records" requires Responsible Engineering Units (REUs) and Responsible

Quality Control (RQC) Units to take measures appropriate to ensure the safekeeping of "working" and "incomplete" documents when not in use. Fireproof cabinets were found in the units visited, and discussions with cognizant personnel indicated efforts were made to comply with good safekeeping practices. Also, evidence indicates that provisions for reconstruction of missing records are in place as referenced in WBN-QCI-1.08 when and if a document is mislocated while inprocess in the DCU.

3.12.2 Issue - Inspection Rejection Notices are not considered quality documents (IN-86-290-001) (IN-85-998-002) (Generically applicable to WBN and BLN) (XX-85-089-002)

Specific Evaluation

The issue was evaluated at WBN and BLN. At WBN, a review was conducted of QCI 1.02 1 and NSRS Report I-85-443-WBN. Discussions were also held with cognizant individuals.

At BLN, a review was conducted of BNP QCP-10.26 "Quality Control Investigation Report", BNP-QCP-10.43 "Inspection Rejection Notice" and BNP-QCP 10.4 "Control of Nonconformance."

Discussion

At BLN, QACEC evaluation revealed that the "Quality Control Investigation Report," (QCIR) was used by engineering personnel to document, disposition, and control known or suspected nonconformances. All Bellefonte personnel were able to identify a potential nonconforming condition by reporting it immediately for prompt investigation and evaluation. A Nonconformance Report would be written according to BNP-QCP-10.26 "Quality Control Investigation Report," if engineering evaluated the condition as a "reportable nonconformance." If the condition was not a reportable nonconformance, the Quality Control Investigation Report was completed in accordance with BNP-QCP-10.26.

In 1983, the Quality Control Investigation Report procedure BNP-QCP 10.26 was superceded by BNP-QCP 10.43, "Inspection Rejection Notice" and BNP-QCP 10.4, "Control of Nonconformances." The Inspection Rejection Notice procedure covered the documenting of rejected in-process inspections by QC. The Inspection Rejection Notice was written by the QC inspectors to notify the craft and engineering of a failed inspection. Upon receipt, the craft and/or engineering would correct the condition and notify QC for reinspection. If the rejected condition cannot be corrected to meet the specification, a Field Change Request

may be generated for engineering Inspection Rejection Notices to document unsatisfactory inspections. However, in accordance with procedure BNP-QCP 10.43, this document is not retained as a quality record but is used as a communication and trending tool. Therefore, Bellefonte does not have an adequate program in place to document rejectable in process inspections.

At WBN, QCI-1.02-1 states that the Inspection Rejection Notice System is a communication and trending analysis tool which identifies conditions that do not fall within the scope of the Nonconformance Reporting Systems.

Contrary to the above, evidence indicates that IRNs have been used to report deficiencies affecting quality and are not considered Life of Plant (LOP) documents. Nuclear Safety Review Staff (NSRS) Report Number I-85-443-WBN further states that the writing of IRNs has, in some instances, resulted in Field Changes (FCRs) and NCRs. Procedures do not require that IRN identifiers be referenced on any related documentation such as an NCR.

Conclusion

The issue is factual and presents a problem for which corrective action has been, or is being, taken as result of the evaluation (Class D). Contrary to Appendix B 10 CFR 50, IRNs which are records furnishing evidence of activities affecting quality, are not being properly maintained. See CATD 80413-WBN-01 for details concerning IRNs not being maintained as LOP documents at WBN and CATD 80106-BLN-03 for BLN.

Causes

The cause of the finding was a lack of management awareness concerning the QA records program deficiency and responsibility for correction was assigned to the Project QA Organization. CATD 80413-WBN-01 and CATD 80106-BLN-03 were issued to identify that IRNs were not being properly stored as QA records. As QA uses the IRN to document unsatisfactory conditions, management should have been aware of the need to retain the documents as QA records.

Corrective Action

The responsibility for resolution of the CATD was assigned to the QA organization.

CATD 80413-WBN-01 was generated to identify that IRNs are not considered permanent plant documents although they are used to document activities affecting quality. The response, submitted by the QA organization, stated that QCP-1.02-1 would be revised and all IRNs on hand will be collected and transferred to the vault for storage. QACEG has concurred with the CAP.

CATD 80106 BLN 03 was issued to BLN-QA to identify that IRNs are being used to document unsatisfactory inspections but are not being kept as a quality record. BLN-QA replied that BNP-QCP-10.43, "Inspection Reject Notice," will be revised to make the IRN a QA record. QACEG has concurred with the CAP.

3.12.3 Issue Inadequate NCR/IRN instructions (Site-specific WBN) (IN-85-414-002, IN-85-414-004, IN-86-153-001, IN-85-855-001 and IN-85 900 X02)

Specific Evaluation

The issue was evaluated at WBN, SQN, BFN, and BLN. At WBN, the evaluation process consisted of reviewing the following documents to establish the requirements for issuing nonconformance reports: 10 CFR 50, Appendix B; NQAM, Part I, Section 2.16 "Condition Adverse to Quality"; QAP 15.1 "Reporting and Correcting Nonconformances"; QCI-1.02 "Control of Nonconforming Items"; QCI-1.02-1 "Inspection Rejection Notice"; and QCI-1.08 "Quality Assurance Records." Additionally, the Administrative Instruction (AI), AI 2.8.5 "Corrective Action" (draft form) was reviewed to compare the original nonconformance program to the revised nonconformance program. Also NSRS report I-85-443-WBN was reviewed and discussions were held with several QA/QC supervisors. IRNs were also reviewed for compliance to respective procedures.

At SQN, the evaluation process consisted of reviewing the following documents: NQAM Part I, Section 2.16 "Corrective Action"; AI 12 (Part I) "Corrective Action"; AI-12 (Part II) "Adverse Conditions and Corrective Actions"; AI-7 "Recorder Charts and Quality Assurance Records"; and AI 20 "QA Inspection Program." Also, Section Instruction Letter (SIL), SIL MS/DCU7 "Sequoyah Document Verification Sampling

Plan," various memorandums, Computer Report "CQA Master Tracking Log-SCRs, PIRs, NCRs," and a discussion with a Lead Project Services Staff Engineer were utilized in the evaluation of this issue.

At BFN, the evaluation process consisted of reviewing the following documents: NQAM, Part I, Section 2.16, "Conditions Adverse to Quality;" NQAM, Part III, Section 7.2 "Corrective Action"; and NQAM, Part II, Section 5.4 "Quality Assurance Surveys." Also, Nuclear Engineering Procedure NEP 9.1, Engineering Procedure EN DES EP 1.26 "Nonconformance Reporting and Handling by EN DES," and Site Director Standard Practice BF-SDSP-3.7, "Corrective Actions," were reviewed for applicability to this issue.

At BLN, the evaluation process consisted of reviewing QCP 10.7 "Quality Assurance Records." Additionally, a discussion with the Supervisor of the Document Control Unit A, was held to establish compliance to the procedure. Procedures QAP-15.1 "Reporting and Correcting Nonconformances," QCP 10.4 "Control of Nonconformances and Significant Condition Reports," and Engineering Procedure EN DES EP-1.26 "Nonconformances Reporting and Handling by EN DES" were reviewed for applicability.

Discussion

At WBN, "Inspection Rejection Notice QCI 1.02-1," Revision 8, March 8, 1985, stated that rejections are to be recorded before the inspector leaves the work area and not when the

inspection is performed. The supervisors substantiated the claim and a review of QCI-1.02-1, Revision 8 confirmed that inspections were documented at the end of the shift and not necessarily at the time of inspection. Revision 9 of the procedure subsequently required that all restraints to acceptance be documented on an IRN.

A review for record retention requirements for IRNs indicated that IRNs were not considered as Life of Plant documents. As a result, the documents, which record activities affecting quality are not being properly maintained.

A specific instance was provided in a concern where installing and cutting out of an "out of tolerance" item was done without issuing a Field Change Request (FCR) or NCR. The evaluation disclosed that the procedures controlling this activity, QCI-1.02-1 "Inspection Rejection Notice", QCI 1.02 "Control of Nonconforming Items" and QCI 1.13 "Preparation and Documentation of Field Change Requests" allow an item, while in process, to be repaired or reworked within the drawing or specification requirements prior to final acceptance. If the item is presented for inspection, by procedure the rejectable condition must be documented at that time on an Inspection Rejection Notice.

A review was performed of IRNs and discussions were held with QA/QC supervisors in an effort to determine if it is required that IRNs are closed before releasing rejected equipment. No objective evidence was produced to substantiate this requirement.

With respect to IRNs being issued for conditions corrected at time of inspections, QCI-1.02-1 dated September 27, 1985 requires that an IRN be issued in all instances of failed inspections and may be closed at the same time.

Next, the issue as it pertains to proper instructions for voiding NCRs was evaluated. QCI 1.02 "Control of Nonconforming Items", AI 2.8.3 "Nonconformance 10CFR50 Appendix B," and QAP-15.1 "Reporting and Correcting Nonconformances" provides instructions for processing and voiding NCRs. NCRs are required by these procedures to have complete justification for voiding. Although QCI-1.08 "Quality Assurance Records" does not provide specific instructions for initiating NCRs, it does reference QCI-1.02 "Control of Nonconforming Items." This procedure provides instructions for initiating, processing, and resolving NCRs.

Lastly, the issue of reporting problems was evaluated. The TVA program had many methods to report problems. This system was confusing as to when to report a problem and on what document. The QACEG evaluation revealed that TVA has identified this problem and is addressing this concern by the Condition Adverse to Quality (CAQ) Program under the NQAM, Part I, Section 2.16.

Open NCRs initiated prior to the implementation date of the CAQR Process are handled in accordance with Nuclear Engineering procedure NEP 9.1, Revision 2, June 30, 1987.

At BFN, only three concerns within this issue were applicable. These concerns deal with reporting of problems, NCR processing and voiding, and procedures not specifying methods for resolving nonconformances noted during document reviews.

The QACEG evaluation of the NCR program revealed that NCRs are not used at the BFN site itself. However, nonconforming conditions identified by EN DES were documented on NCRs and handled as described in Engineering procedure EN DES EP 1.26, "Nonconformance Reporting and Handling by EN DES" Revision 9, March 15, 1985. The procedure allows for a complete resolution close out cycle. During the initiation phase, if the condition is not considered a nonconformance or failure to comply, the supervisor documents the reason and verbally notifies the preparer of the decision. Also, after typing, the NCR is signed by the Branch Chief/Project Manager.

The resolution processing methods for nonconforming items noted during the performance of document review at BFN utilize CARs and DRs, as specified in the TVA generic procedure Nuclear Quality Assurance Manual (NQAM), Part III, Section 7.2 "Corrective Action," Revision 0, June 18, 1986. At BFN, QA reviews documents during surveillance, random surveys, hold points, and major modifications before the documents are sent to Document Control Unit (DCU). The NQAM, Part II, Section 5.4, "Quality Assurance Surveys," October 12, 1984, Paragraph 3.0 delineates the use of a DR/CAR in accordance with the NQAM, Part III, Section 7.2.

At BLN and SQN only two concerns within this issue were applicable. These concerns deal with NCR cycling and voiding, and procedures not specifying methods for resolving nonconformances noted during document reviews. At BLN, QAP 15.1 "Reporting and Correcting Nonconformances" Revision 9, September 19, 1983, contains detailed requirements for revising, voiding and closing NCRs. OCP-10.4 "Control of Nonconformances and Significant Condition Reports", Revision 14, March 25, 1986 further delineate the process for revising, invalidating and closing NCRs. Section 7.6 "Revising, Voiding and Closing NCRs" of QAP-15.1 and section 6.9 " Invalidating NCRs" of QCP-10.4 describes the steps required to "Invalid" or "Void" NCRs. QACEG held discussions with Document Control personnel to confirm the existence of a procedure to resolve/process nonconforming items found during document review. Quality Control Procedure (QCP) QCP-10.7 "Quality Assurance Records" Revision 11, May 12, 1986, stipulates that records found to be unacceptable are returned with comments to the originator. The Responsible Engineering Unit (REU)/Responsible Quality Control Unit (RQC) corrects the record as necessary. The REU/RQC resubmits the record to the DQU A. The record is then reprocessed accordingly. Discussions with the Supervisor of DCU-A indicate compliance with QCP 10.7.

At SQN, the QACEGs evaluation of the issue revealed that NCRs are no longer being used at SQN. Corrective Action Reports (CARs) and Discrepancy Reports (DRs) were used at SQN to resolve deficiencies identified during the operations phase.

However, at BLN and SQN, prior to February 23, 1987, nonconforming conditions identified by EN DES were handled as described in EN DES EP1.26. That procedure allowed for a complete resolution close-out cycle. During the initiation phase, if the condition was not considered a nonconformance or failure to comply, the supervisor documented the reason on the NCR and verbally notified the preparer of the decision. The voided NCR was then typed and signed by the Branch Chief/Project Manager. A memo from the Branch Chief/Program Manager along with the NCR was filed, a copy was sent to QA, and the original NCR was sent to RIMS.

As of February 23, 1987, Conditions Adverse to Quality Reports (CAQRs) replaced CARs, DRs, and NCRs for Nuclear Power at SQN and Design Engineering for SQN. The NQAM, Part I, Section 2.16 "Corrective Action," AI-12 (Part I) "Corrective Action," and NEP-9.1 "Corrective Action" dictated the use of CAQRs to replace the numerous other methods that had been previously utilized to resolve discrepancies potentially affecting quality.

Nonconformances noted during document review are covered by several SQA procedures. QACEC reviewed Administrative Instruction AI-7 Revision 14; "Recorder Charts and Quality Assurance Records," AI 20, "QA Inspection Programs," Revision 13, February 20, 1987; Quality Assurance Section Instruction Letter (QA SIL) 5.3 "Maintenance Requests QA Staff Review," Revision 14; SIL MS/DCU7 "Sequoyah Document Control Verification Sampling Plan," Revision 0; and Memorandum from W. E. Andrews, subject; Accept/Reject Rates for Routine Plant QA Review and Inspection.

AI 7 defines the responsibility for completeness of QA records. AI-20 specifies that the SQN Site Quality Manager's organization of DNQA is responsible for documenting and reviewing inspection results. QA-SIL-5.3 states that the QA Staff Supervisor is responsible for ensuring that any problem areas or deficiency associated with the review of CSSC WR/MRs are satisfactorily resolved; a final QA review of MRs is performed to a 12 point checklist. MS/DCU7 states that it is the responsibility of SQN Document Control and POTC Administration Services to verify that the number of pages submitted corresponds to the transmittal document attached to the records. In lieu of 100% verification, record completeness shall be verified utilizing a single sampling of normal or tightened inspections from MIL STD-105D. MS/DCU7 further defines the responsibility to ensure completeness of submitted records.

Conclusion

At WBN, the issue is factual and identifies a problem for which corrective action has been, or is being taken as a result of the ECTG evaluation (Class D). Revision 9 to QCI 1.02-1 resolved the concerns of timing, documenting, and not issuing IRNs for conditions corrected at the time of inspection. The procedure now requires that IRNs be issued at the time the rejectable condition is found. This change also eliminated the possibility of inspections, both acceptable and rejectable, not being recorded. The change however, did not address the requirement of Appendix B to 10CFR50 to retain inspection records since they are a QA record, for the Life of the Plant (LOP). Corrective Action Tracking Document (CATD) 80413-WBN-01 was issued to address this oversight.

Voiding of NCRs without complete justification could not be verified as factual. QCI-1.02, AI-2.83, and QAP-15.1 provides instructions for processing and voiding NCRs. NCRs are required by these procedures to have complete justification for voided NCRs. Although QCI 1.08 does not provide specific instructions for initiating NCRs, it does reference QCI 1.02" Control of Nonconforming Items". This procedure provides instructions for initiating, processing, and resolving NCRs.

TVA's management recognized that the various deficiency reporting programs in place were very difficult to understand and has instituted a new simplified program for the reporting of Conditions Adverse to Quality (CAQ). This new program is identified in Administrative Instruction AI 2.8.5, "Corrective Action", and is presently in draft form. CATD 80402-WBN-01 was issued to track this program through implementation.

At BFN, the issue is factual and identifies a problem, but corrective action for the problem was initiated before the evaluation of the issue was undertaken. TVA's management recognized that various deficiency reporting programs were very difficult to understand and TVA has instituted a new simplified program for the reporting of Conditions Adverse to Quality (CAQ). This new program is identified in Site Director Standard Practice BF SDSP 3.7, titled "Corrective Action" dated January 15, 1987 which is the implementing procedure for BFN.

At BLN, the issue cannot be verified as factual. Procedures are in place which resolve unacceptable records found during the performance of document review, and adequately permit trending of IRNs.

At SQN, the issue cannot be verified as factual. Procedures are in place which provides complete instructions for processing and voiding of NCRs, and resolving nonconforming conditions noted during document review

At WBN, NCR 7031 was issued October 10, 1986 identifying the failure to consistently document all failed inspections. The timeframe was February 24, 1986 through September 30, 1986. Subsequently, the NCR was elevated to an Significant Condition Report which was closed November 5, 1986.

Causes

The cause of the finding was the inability to ensure adequate procedures were in effect and has been assigned to the project QA organization.

CATD 80413-WBN 01 was issued identifying that IRNs were not considered QA records. Because of this philosophy, applicable procedures did not provide adequate instructions concerning the retention of IRNs.

Corrective Action

CATD 80413-WBN-01 was initiated to WBN-QA to identify that IRNs are not being properly stored nor do procedures adequately address record retention requirements for IRNs. The response indicated that a new procedure would be issued and all IRNs on hand collected and stored in the vault.

3.12.4 Issue There is no program for trending NCRs and the IRN trend program is inadequate (site specific - WBN) (IN 85 279 001 and WI-85 013-006)

Specific Evaluation

The issue was evaluated at WBN and BLN. At WBN, a review was conducted of QCI 1.58, "Trend Analysis," Revision 2 through 4 and QCI-1.02-1.

At BLN, QAP-16.5, "Trending Analysis," Revision 1, October 1, 1984; Bellefonte Nuclear Procedures - Quality Control Procedure (BNP-QCP), BNP-QCP-10.1, "Trending Analysis Program," Revision 2, August 21, 1984; TVA procedure QA - Staff Procedure (QA-SP) 7.2, "Trending Analysis," Revision 0, November 11, 1978 were reviewed and personnel interviews were also conducted. Implementation of trending activities was verified during the evaluator's review of Quality Trend Analysis Reports for the last quarter of 1984 and the first quarter of 1985.

Discussion

BLN Quality Assurance Procedure (QAP), QAP-16.5, "Trending Analysis," Revision 1, October 1, 1984 required a site procedure to be initiated describing in detail how trending analyses were to be performed. At WBN, a review was performed of QCI-1.58, "Trend Analysis," Revision 2 through 4, October 24, 1984 through February 25, 1986. The review indicated that the procedure established an adequate program for the trending of NCRs; which was in effect during the timeframe of the concern.

At BLN, Quality Assurance Staff Procedure, (QA SP), QA-SP 7.2, "Trending Analysis," Revision 0 established programmatic requirements for trending analysis as early as November 11, 1978. These requirements are currently reflected in Bellefonte Nuclear Procedure - Quality Control Procedure (BNP-QCP), BNP-QCP-10.41, "Trending Analysis Program," Revision 2, August 21, 1984.

The evaluation of the IRN trend analysis program at WBN, consisted of reviewing QCI 1.02 1. The review indicated that QCI-1.02-1 allowed unacceptable work to be corrected after the initial inspection without documenting the unacceptable condition on an IRN. As a result, the IRN trend analysis program, although being performed, could not have reflected an accurate trend of rejected items on unacceptable work.

However, corrective action was taken by issuing QCI-1.02-1, Revision 9, September 27, 1985. This QCI states, "The inspector, using the IRN form, documents all restraints to the acceptance of work in progress."

Conclusion

This issue is considered factual but corrective action for the problem was initiated before the QACEG evaluation (Class C). As stated in the finding, inaccurate trending of the IRN was being performed.

Corrective Action

Corrective action had taken place before the evaluation. QCI 1.02 1 was revised to detail that an IRN be generated to document all restraints to the acceptance of work in progress.

3.13 Element - Corrective action completion/implementation

3.13.1 Issue Corrective action implementation is incomplete (Site-specific WBN) (IN-85-293-001, IN-85-993-001, WI 85 030-004, and WI 85 030-010)

Specific Evaluation

This issue was evaluated at WBN only. A review was conducted of the following documents: Engineering Change Notice (ECN) 4329, October 3, 1983; Nuclear Power Workplan 3765; NCR CR 2375R; and Quality Assurance Evaluation Report QAE-80-2. Also, discussions were held with cognizant personnel.

Discussion

NCR 4412 was identified as an example of improper closure of a Quality Document by the concerned individual. An extensive review of controlling documents revealed that Engineering Change Notice (ECN) 4329 was issued October 3, 1983 to replace undersized orifice plates and to close NCR 4412R. A review of Nuclear Power (NUC PR) Workplan 3765 indicates that new orifice plates were installed per ECN 4329, and final acceptance was on December 27, 1983.

There was a concern that inspectors were being directed to accept cable tray support fillet welds prior to February 1981, without reinspection. It was determined that Engineering based their evaluation and direction on information provided by the Watts Bar Nuclear Plant units 1 and 2 Cable Tray Support Fillet Welds Sampling Program. This sample program was implemented as a corrective action for NCR 2375R. Based on the results of this review, Engineering Design Group (EN DES) accepted all as-built

Category I cable tray support fillet welds made prior to February 6, 1981. Therefore, inspectors were directed to sign off on a computer test card, as acceptable, all welds covered by NCR 2375R per informal memorandum of April 5, 1982. No RIMS number.

Quality Assurance Evaluation (QAE) 80-2 presented non-mandatory recommendations for improving the overall welding and NDE program. Since it was an informal evaluation, no nonconformances were issued and no corrective actions were required. TVA Construction personnel participated in a welding improvement workshop on January 27 and 28, 1981. This workshop was designed to further identify, discuss, and implement ways of improving the overall effectiveness of the OEDC welding program. In addition, TVA demonstrated a receptiveness to the recommendations and responded in memorandum "Review and Evaluation of OEDC Welding and NDE Program, April 8, 1981, (RIMS '81 0408 259), Attachment B, and memorandum "Responsibilities for Meeting Quality Control and/or Quality Assurance Requirements," September 7, 1982, (RIMS '81 0907 014), Attachment C.

Conclusion

The issue could not be verified as factual (Class A). None of the instances provided indicated any problems had taken place which affected satisfactory corrective action implementation.

3.14 Element - QCIRs Superceded by IRNs

3.14.1 Issue - Management deleted the use of QCIRs to identify potential nonconformances and replacing them with IRNs which do not require the same formal review and are not considered quality documents. (XX-85-C89-002, IN 85-998-002)

Specific Evaluation

This issue was generic to WBN and BLN. It was evaluated by researching TVA upper tier commitments and implementing procedures such as BNP-QCP 10.26 "Quality Control Investigation Report," BNP-QCP 10.43 "Inspection Rejection Notices," BNP-QCP 10.4 "Control of Nonconformances," WBN-QCI 1.02 1 "Inspection Rejection Notices," and WBN QCP 1.02-1 "Control of Nonconforming items."

Discussion

At BLN, the QCIR was used by engineering personnel to document, disposition, and control known or suspected nonconformances. All BLN personnel were able to identify a potential nonconforming condition by reporting it immediately for prompt investigation and evaluation. An NCR would be written according to BNP-QCP-10.26 "Quality Control Investigation Report," if engineering evaluated the condition as a "reportable nonconformance." If the condition was not a reportable nonconformance, the QCIR was completed in accordance with BNP-QCP 10.26.

In 1983, the QCIR procedure BNP-QCP 10.26 was superseded by BNP-QCP 10.43, "Inspection Rejection Notice" and BNP-QCP 10.4, "Control of Nonconformances." The IRN procedure covered the documenting of rejected in-process inspections by QC. The IRN was written by the QC inspectors to notify the craft and engineering of a failed inspection.

Upon receipt, the craft and/or engineering would correct the condition and notify QC for reinspection. If the rejected condition could not be corrected to meet the specification, an FCR is generated for engineering disposition. As stated above, BLN is utilizing IRNs to document unsatisfactory inspections. However, in accordance with procedure BNP-QCP-10.43, this document is not retained as a quality record but is used as a communication and trending tool.

At WBN, QCP 1.02 1 "Inspection Rejection Notice" describes the use of IRNs. QCP-1.02-1 superseded QCI-1.02-1 on April 27, 1987. QCI 1.02 1 did not consider IRNs to be a quality document.

Conclusion

The issue is factual and presents a problem for which corrective action has been, or is being, taken as a result of an employee concerns evaluation (Class D).

Cause

IRNs are not considered quality documents and are not retained as permanent records. TVA is violating the 10 CFR 50 Appendix B Criterion XVII which states in part "Sufficient records shall be maintained to furnish evidence of activities affecting quality." The apparent cause of this problem is TVA's interpretation of the requirement that records are required to be maintained that furnish evidence of quality.

Corrective Action

CATD 80413-WBN-01 was issued because WBN did not have a program in place for the documentation of failed inspections to be retained as a quality record. The CAP superseded QCI 1.02 1 with QCP 1.02 1. QCP 1.02-1 made IRNs a quality document and such are retained for life of plant.

CATD 80106-BLN-03 was also written to identify the fact that QC inspectors write IRNs to document failed inspections and do not retain them as a quality record. BLN-QA has responded with an acceptable Corrective Action Plan, which is to revise BNP-QCP-10.43 to make IRNs Quality documents.

3.15 Element Nonconformance Program Adequacy

3.15.1 Issue - The quality program is inadequate to identify all nonconformances.

QACEG has performed the Evaluation of Nonconformance Program Adequacy by conducting reviews of previous QACEG evaluations and their results. The previous evaluations indicated that many problems were apparent within the Nonconformance program. On that basis QACEG conducted additional evaluations specific to the subcategory level. The results of those additional evaluations are presented within this section of the subcategory report.

Because the element of "Nonconformance Program Adequacy" involves a large portion of the overall TVA Nonconformance Program, QACEG has divided the element into four seperate discussions as follows:

1) The Inspection Rejection Notice Program

2) Nonconformance Reporting SQM-86-002-004, Site Specific to SQN, XX-85-102-010 generic to all sites, WI 85 004-001, In-85-472-002, IN-85-251-002 site specific to WBN

3) Nonconformance Trending IN-85-279-001, WI-85-013-006 Generic to BLN and WBN.

4) The Quality Program is inadequate to identify all Nonconformances. (Watts Bar Site Specific) EX 85-039 004

Specific Evaluation

At WBN a Review was conducted of Appendix B to 10CFR50 "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants"; TVA Topical Report, TVA-TR75-1A Revisions 8 and 9; TVA Nuclear Quality Assurance Manual (NQAM), January 26, 1987; ANSI N45.2.10-1973, "Quality Assurance Terms and Definitions"; Construction Engineering Procedure, CEP-1.02 "Corrective Action," Revisions 0 and 1; QCI 1.02" Control of Nonconforming Items," Revision 15; QTC Report IN-85-279-006, AI-2.8.3 "Nonconformances," Revision 10; AI 2.8.5 "Conditions Adverse to Quality -Corrective Actions," Revisions 0 and 2; Watts Bar Nuclear Plant Field Instruction WBFI G21, "Inspection Rejection Notice," Revision May 20, 1982 QCI-1.02-1 "Inspection Rejection Notice," Revision 0; CEP 1.02-1 "Dispositioning of Inspection Rejection Notice," Revision 0; CEP-1.02-1 "Dispositioning of Inspection Rejection Notice," Revision 0; QCI-1.58 "Trend Analysis and Monitoring," Revision 2, 4, and 5; QMI 816.3 "Trend Analysis," Revision 0; OC-QAP-16.5 "Trend Analysis," Revision 2; AI-7.9 "Tracking and Reporting of Open Items (TROI)," Revision 3; TROI users guide, Section 1.1 "Policies, Responsibilities, and Requirements for ONP Consolidation Tracking and Trending,"

Revision 16; TROI user guide, Section 1.2 "TROI Reports and Screens," Revision 15; QCI-1.02-2 "Review of Significant NCR Action Required to Prevent Recurrence," Revision 0; QCI-1.08-1 "Records Retrieval," Revision 1; DQAI-113 "Sampling for Inspection by Attributes," Revision 0; Military Standard MIL-STD-105D "Sampling Procedures and Tables for Inspection by Attributes," April 29, 1963; and Quality Assurance Procedure QAP-15.1 "Reporting and Correcting Nonconformances." Various documentation including CAQRs, NCRs, IRNs, and Trend Reports were reviewed and discussions were held with cognizant personnel.

At BFN the evaluation included a review of Appendix B to 10 CFR 50, Criteria XV and XVI, TVA Topical Report TVA-TR75 1A, Revisions 8 and 9, and the NQAM. Also discussions were held with two quality supervisors and two inspectors.

At SQN the following documents were reviewed: Appendix B to 10 CFR 50; NQAM, December 23, 1985; Sequoyah Standard Practice SQM-2 "Maintenance Management System," Revision 14, July 17, 1985 through Revision 20, September 11, 1986; Quality Assurance Instruction Letter (QA SIL), QA SIL 16.1 "Corrective Action and Adverse Conditions," Revision 15, March 31, 1986 including previous Revisions 13 and 14; QA SIL 18.1 "Surveys," Revision 11, March 24, 1986, including previous Revisions 6, 7, 8, 9, and 10; Division of Quality Assurance Instruction (DQAI), DQAI-502, "Surveillance Program," Revision 0, August 30,

1985 and Revision 1, August 29, 1986; Office of Engineering-Operation Instructions (OE-OI) OE-OI-3001, "Drawing Originals Checking Out and Checking In," Revision 0; OE-OI-4001 "Contract Administration - Handling of Vendor Drawings," Revision 0; OE-OI 4003, "Prints and Microfilm - Routing Distribution," Revision 0; Engineering Office Administrative Instruction (SQNP) AI-08, "Drawing and Reproduction," September 10, 1985; AI-12, Adverse Conditions and Corrective Action," August 2, 1985; and QC Observation Log Sheets.

Also, NSRS Report I-86-185-SQN, March 5, 1986 and Generic Concern Task Force Report (GCTF) June 6, 1986 were reviewed.

In addition, the evaluation process included discussions with the Quality Engineering/Quality Control (QE/QC) Manager, Office Supervisor Document Control - Nuclear Engineering, Quality Assurance (QA) Manager - Quality Assurance Group, Assistant Supervisor and the investigators identified in the NSRS and GCIF Reports, regarding the reporting and documenting of deviations.

At BLN, QAP 16.5, "Trending Analysis," Revision 1, October 1, 1984, Bellefonte Nuclear Procedures - Quality Control Procedure (BNP-QCP), BNP-QCP 10.1, "Trending Analysis Program," Revision 2, August 21, 1984, TVA procedure QA - Staff Procedure QA SP 7.2 "Trend Analysis, Revision 0, November 11, 1978 were reviewed and personnel interviews were conducted. Implementation of trending activities was

verified during the evaluator's review of Quality Trend Analysis Reports for the last quarter of 1984 and the first quarter of 1985.

Discussion (Inspection Rejection Notice-IRN)

Quality Control Instruction QCI 1.02 1 defines an Inspection Rejection Notice (IRN) as "A Communication Tool Used By Inspection Personnel to Inform Craft and Engineering of an unacceptable condition of work in progress which can normally be corrected within the Acceptance Criteria." QACEG has determined through review of QCI 1.02 1 that IRNs are not utilized for final acceptance of an item or component, but rather document unacceptable work in progress. Final acceptance of an item/component is accomplished by use of individual item/component final acceptance tests cards.

QACEG performed a random review of approximately 100 IRNs closed prior to the current IRN program contained in QCP 1-.02-1 Revision 0, April 27, 1987. A number of discrepancies were noted from this review. These discrepancies consisted of: IRNs did not provide information on how a nonconforming condition was reworked or repaired; IRNs were closed prior to Corrective Action being taken; the IRN program did not address the closure or transfer of open IRNs at time of system turnover to power operations; and IRNs are used to identify discrepancies or nonconformances and are not considered Life of Plant (LOP) documents.

Discussion (Nonconformance Reporting - NCR)

QACEG evaluation of Nonconformance Reporting consisted of a review of the NCR program in the areas of reportability, root cause, and dispositioning.

The issue of reportability was evaluated by reviewing applicable documentation, nonconformance reports and holding discussions with cognizant personnel. Based on the QACEG evaluation, it was verified that deficiencies are being reported as required and no procedural violations were noted.

QACEG Evaluation of Root Cause Determination included a review of QCI 1.02, "Control of Nonconforming Items, "Revision 15, which provided no specific criteria on the assignment of "apparent cause" of nonconforming conditions addressed on NCRs. QTC Report IN-85-279-006 was also reviewed in conjunction with this evaluation.

Also, 90 significant NCRs, were reviewed to determine if the root cause had been determined.

The root cause of significant NCRs must be established to fulfill the requirements of Appendix B to 10 CFR 50, Criterion XVI, so that corrective actions can be taken to preclude recurrence of the 90 significant NCRs checked. Seventeen of the NCRs, which ranged from one and one-half to two years old, had not had the root cause identified.

A review of NCR's to determine if dispositions were adequate revealed the issue is factual. TVA QA has issued Significant Condition Report WBN WEP 8601-RO to document a lack of technical justification for some "use-as-is" and "Repair" NCR Dispositions. QACEG evaluation also revealed that some Watts Bar NCRs were dispositioned using sampling plans that were not based on recognized standards. Discussions held with cognizant QA Personnel revealed that Watts Bar Quality Assurance Management implemented an unwritten Policy where QC inspectors were not allowed to document nonconforming conditions noted on vendor supplied items.

Discussion (Nonconforming Trending)

QACEG evaluation revealed no evidence of a QA Trending Program at WBN for NCR's prior to May 16, 1983. (Issue Date of QCI 1.58) |R6

QCI 1.58 was issued to Trend Inspection Rejection Notices (IRN) but did not include Nonconformance Reports. Revision two of QCI 1.58 issued October 29, 1984 incorporated Nonconformance Reports, Quality Assurance Reports, Audits, and Surveillance Instruction Reports in the trending program.

QACEG could also find no evidence of an NCR Trending Program at BLN prior to October 1984. This resulted in TVA management not being informed of adverse trends which required management attention and corrective action. |R6

On September 16, 1987, QCI 1.58 was cancelled and DNQA Procedure QMI 816.3, Revision 0, "Trend Analysis" was adopted. The scope of this procedure includes the analysis of CAQs from the TROI Data Base and will include QC Inspection Reports upon the completion of the Quality Control Inspection System (QCIS) Data Base. TVA anticipates completion of this Data Base by December 1987. QMI 816.3 requires a CAQ to be generated when an adverse trend is identified, but does not define a Trend Baseline used in determining an Adverse Trend. Previous QACEG evaluations, as documented in Subcategory Report 80200, identified the fact that no evidence exists that a CAQ has been issued as a result of an adverse trend. Apparent negative trends have been recognized but no CAQRs have been written because no specific definition of "Adverse" exists. It was also identified that the TROI Data Base that tracks and trends CAQs is inaccurate. The TROI Data Base needs to have the extraneous information, not of quality related origin, filtered out. The data being provided is untimely (eight to ten weeks old) and not totally accurate because of an over saturated data base.

During the timeframe of May 16, 1983, when Trending of IRNs began and September 27, 1985, (date of Revision 9 to QCI-1.02-1) it was found that the IRN Trend Program was inaccurate. This inaccuracy was due to Inspection Rejection Procedure (QCI-1.02-1, "Inspection Rejection Notice." This procedure allowed an unacceptable condition

to be corrected without documenting it on an IRN, thereby causing inaccurate monthly Trend Reports. QCI-1.02-1, Revision 9, was issued September 27, 1985, requiring the inspector, using the IRN form, to document all restraints to the acceptance of the work in progress.

Discussion (The Quality Program is inadequate to identify all Nonconformances (EX-85-039-004) site specific to WBN).

QACEG evaluation revealed that Significant Condition Report Number 7031 was issued by Watts Bar Welding Quality Control (WQC) on October 9, 1986 documenting that in isolated cases, WQC did not document all failed inspections on IRNs. The instances in which IRNs were not utilized were limited to minor surface defects which were corrected prior to accepting the inspection. Corrective Actions included retraining of all QC inspectors to procedural requirements and monitoring of all IRNs.

Conclusion

The issue of Nonconformance Program adequacy is factual and presents a problem for which Corrective Action has been, or is being taken as a result of the ECTG evaluation (Class D).

Contrary to the requirements of Appendix B to 10CFR50, Criterion XV "Nonconforming Materials, Parts, or Components," Criterion XVI "Corrective Action," and Criterion XVII "Quality Assurance Records," TVA has failed to; adequately identify nonconforming conditions;

adequately determine root cause and provide adequate corrective action to prevent recurrence; and maintain sufficient records of activities affecting quality documented on IRNs. IRNs were not a Life of Plant (LOP) document.

Causes

IRNs were not considered quality documents and were not retained as permanent records. Therefore, the effectiveness of the overall nonconformance reporting program was affected as management did not adequately translate regulatory requirements concerning in process nonconformances, into procedures and/or instructions.

Complete and adequate procedures and instructions that define "Adverse Trends" were not provided.

Corrective Action

QACEG issued CATDs 80400-WBN-01 through 80400-WBN-06 documenting the IRN deficiencies.

CATD 80400-WBN-01 described how a deficiency on a IRN could never reach ninety days old, thereby never receiving the required escalation for resolution. QCP-1.02, Revision 0, dated April 27, 1987, "Inspection Rejection Notices," paragraph 6.2.3. states; "Those IRNs not closed within ninety days will be escalated to the Construction Engineer and QC Section Supervisor for resolution.

This requirement is in conflict with paragraph 6.4.2 which states in part; "If the failed inspection condition has not been corrected, generate a new IRN per paragraph 6.1 and note in reinspection section of the IRN the second failed inspection and reference the new IRN number. Sign off previous IRN as complete.

It is also identified that there was approximately 532 open, Unit 2, IRNs dating back to 1983, that are unresolved. TVA's response was that "while it is possible that a condition noted on an IRN could remain open for a period exceeding 90 days, it is unlikely." The reason QC QCP-1.02 was written to close an IRN upon satisfactory reinspection was to provide a means to trend those items." TVA QA has also stated that a new "Inspection Report Program" will be implemented that "will alleviate the IRN program problems." WBN QA has also compiled a list of 500 plus open IRN's and sent it to Construction Engineering" who are presently working to provide dispositions for closures."

80400-WBN-02 and 80400-WBN-06 issued to describe various discrepancies and dispositioning, voiding and closing of IRNs.

In response to 80400-WBN-02 and 80400-WBN-06 TVA has provided clarification and justification for Engineering disposition of IRN's and issued CAQR WBP870875 R0 to identify discrepant conditions found on IRN H-REH 10, in

addition TVA QA stated that all Category I conduit and supports on Unit 1 WBN are to be reinspected in accordance with Walkdown Procedure WP 3. This procedure establishes a requirement to update the Records Accountability Program.

80400-WBN-03 issued to describe a nonconforming condition on hanger welds that was dispositioned by Engineering utilizing the FCR form rather than the NCR form.

In response to 80400-WBN-03 TVA QA provided clarification to the issue as follows;

"IRN Number W8700985 was written because of a drawing discrepancy in the flare bevel weld symbol and the associated note (6" min. weld) in detail H4-H4 on drawing 47-W970 4R6."

"FCR-E20967 was issued to place the existing 6" minimum weld note in the tail of the flare bevel weld symbol as required per AWS A2.4, Symbols for Welding and Nondestructive Testing." WBN QA response was accepted by QACEG as it clarified the issue in that the IRN was issued to obtain resolution of a drawing discrepancy verses a hardware problem.

CATD 80400 WBN-04 was issued describing that since IRNs are now LOP Records and Watts Bar Quality Assurance, has committed to forward all (available) Pre QCP-1.02 IRN's to Records Storage, no mechanism is in place in QCI-1.08-1 to establish traceability with an IRN and the associated item/component. When retrieving inspection records for components, IRNs are not included.

WBN QA has initiated corrective action by submitting a revision request to revise QCI-1.08-1, Attachment A, Part III, to identify IRNs and to add Section 6.2.1.12 which addresses the retrieval method for IRNs previously put in Records Storage.

80400-WBN-05 issued to describe that no controls exist to complete and close IRNs prior to system turnover, the outstanding work items list is not a Life of Plant (LOP) document, and the current revision of QCI 1.22 (transfer of permanent features to nuclear power) Revision 9 does not acknowledge the new Conditions Adverse to Quality Program (CAQ) and requires revision.

In response to 80400-WBN-05 TVA has provided the following:

QCP 1.02 will be revised to require completion/closure of IRNs prior to system turnover. A revision request will be made to QCI 1.22 to require IRNs to be closed prior to system turnover. This will be complete by November 1, 1987.

There is no reason or requirement for the OWIL or punchlist to be maintained as a lifetime document. The OWIL and punchlist are for administrative controls and are not required to be retained. The items on the punchlist and OWIL must be complete prior to final transfer (QCI 1.22, paragraph 6.4.1) and therefore the need to maintain as records is not needed (a prerequisite as defined in the ANSI N45.2.9).

The Division of Nuclear Construction (DNC) corrective action was accepted by QACEG. "QCI-1.22 will be superseded by CEP-1.22, Revision 0 and Revision Request 741 to QCI-1.22 Revision 9 which addresses CAQRs will be incorporated in CEP-1.22 Revision 0."

CATD 80400-WBN-07 was issued describing that WBN QA Management suppressed the identification of nonconforming conditions noted on vendor supplied items. WBN has responded with an acceptable Corrective Action Plan which commits to re-inspect approximately 12 vendor's components for which deficiencies have been noted. WBN also committed to revise Site Quality Assurance Staff Instruction Letter SQA-SIL-5.6 "Monitoring Activities" to add vendor supplied equipment as on attribute to be monitored. R6

CATD 80413-WBN-01 was issued because WBN did not have a program in place for the documentation of failed inspections to be retained as a quality record. The CAP superseded QCI-1.02-1 with QCP-1.02-1. QCP 1.02-1 made IRNs a quality document and such are retained for life of plant.

CATD 80106-BLN-03 was also written to identify the fact that QC inspectors write IRNs to document failed inspections and do not retain them as a quality record. BLN has responded with an acceptable Corrective action Plan, which is to revise BNP-QCP-10.43 to make IRNs Quality documents.

QACEG has issued CATD 80204-WBN-01 to identify inaccuracies found in the Trending Program, and to identify that no definition of an Adverse Trend exists. (80200 Subcategory Report)

Corrective Action of Root Cause Analysis

The Site Engineering and Quality Assurance organizations are responsible to provide correction action resulting from the issue of CATD 80406-WBN-01 resolution.

A sample of 90 significant NCRs selected for review indicated 17 of the NCRs had not had the root cause promptly identified. Upon receipt of TVAs response, it was learned that the sample of significant NCRs taken from the vault were not current working copies and NCR's 6172-R1, 6208, 6224, 6278, 6354 and 6359 had received previous root cause analysis. TVAs response included corrective action for the assignment of root cause to significant NCRs 6218, 6328, 6356, 6416, 6417, W-235-P, W 243-P, W-257-P, W-290-P, W-300-P and W-315-P. Scheduled completion dates for corrective action range between October and November 1987. TVAs response further stated in part; "This situation has been remedied with the implementation of the CAQR program. AI-2.8.5 'condition adverse to quality - corrective actions' delineates in paragraph 6.4.2.2 that the responsible organization will develop a Corrective Action Plan within thirty days of the origination date which will include determination of the root cause of the CAQ, if required. AI 2.8.5 also includes provisions in Section 6.12 for escalation to higher management situations where lower and middle levels of management fail to comply with the timelines and effectiveness of the procedure."

4.0 COLLECTIVE SIGNIFICANCE

The subcategory results indicated that the systems employed to control the nonconformance program were ineffective in assuring compliance to 10CFR50, Appendix B requirements. Management's inability to consistently translate regulatory requirements and commitments into clear and concise procedures resulted in inadequate implementation by the line organization and conflicting directions. Also, in some instances adequate procedures were in place but were not implemented. Because of these conditions, nonconformances were allowed to remain unidentified and/or uncorrected for extended periods of time. Although the problems had been identified by TVA, NRC INPO and others they were allowed to remain uncorrected or, in some cases, effective preventive action was not taken and problems multiplied to a point where the quality of the TVA nuclear program was highly criticized.

TVA, as part of their recovery effort, has instituted a number of new programs to correct noted problems. Particularly, the TVA CAQ Program, now ineffect, has partially corrected the Nonconformance Control and Corrective Action Programs. The new and strengthened programs in place are a significant improvement over past practices, however, their success depends on the ability and willingness of line managers to aggressively pursue their implementation. If commitments made in the Nuclear Perf mance Plan in this regard are fulfilled, the corrective action program will function effectively.

5.0 ATTACHMENTS

Attachment A, Subcategory Summary Table 80400

Attachment B, Corrective Action Tracking Documents