Specific Evaluation

This issue was generic to WBN, SQN, BFN and BLN. The QACEG evaluation of the issue is based on a review of audits and reports from the NRC, Institute of Nuclear Power Operations (INPO), and TVA describing the ineffectiveness of the TVA Audit Groups and responses by TVA on proposed corrective actions. The timeframe of these reports are 1983 through early 1986.

Discussion

A Nuclear Regulatory Commission (NRC) Audit conducted from January 21 25, 1985 and from January 30 -February 1, 1985 resulted in two Severity Level IV violations applicable to WBN QA effectiveness. The violations were: failure to assure the prompt correction of conditions adverse to quality and failure of the engineering and construction audit program to audit applicable design elements at least annually or at least once within the life of the activity, whichever is shorter. The TVA response admitted their deficiency and provided corrective action. (L20 850418 925)

An NSRS management review of the Office of Quality Assurance, dated March 1984, RIMs A02 840618 039, outlines problems and corrective actions within the QA organization including the audit group. Topics include staffing and procedures. TVA has been actively pursuing the strengthening of its entire QA Program. Included in the document file are three reports which demonstrate TVA's actions in correcting past deficiencies. These are: INPO Corporate Evaluation of October 13, 1986; Response to INPO Recommendations, RIMS F01 850826 603; Follow up review of Management Review of the Office of QA, RIMS A02 840618 039.

The TVA major management reorganization as outlined in the NPP consolidates the various Quality Assurance functions relating to engineering, construction and operation under the Director of Nuclear Quality Assurance. The reorganization potentially resolves the issue of audit ineffectiveness by consolidating the responsibility for the TVA QA/QC functions under one department which reports to a high level of management. The reorganization clearly defines the lines of responsibility and authority, to assure that activities will be performed consistently. It focuses management attention and direction on Nuclear QA activities and assures that Nuclear QA personnel are independent of production

personnel. The NPP was designed to correct identified deficiencies in all phases of the Nuclear Program, including the audit program. Management of the audit group was strengthened, additional qualified auditors were hired, stronger procedures were developed and adherence to existing procedures was emphasized.

QACEG examined specific segments of the TVA audit groups performance under the Nuclear Performance Plan of March 9, 1986. The areas that were chosen for examination were those areas that had been identified to be deficient prior to the reorganization. These areas are: staffing, failure to audit all areas, recurring problems, and response time by line management in providing corrective action and to close deficiencies.

There are two audit groups within TVA who are involved with auditing nuclear work. These groups are the Nuclear Quality Assurance and Evaluation Branch (NQA and EB) and the Program Audit Staff of Engineering Assurance (EA). These groups are addressed individually.

1. Staffing

NQA and EB has hired fourteen auditors in the last year. Full staffing (37 auditors) is based on a manpower study which was based on resources needed for adequate manning of each identified audit module (Quality Methods Instruction 312, Attachment 4).The group is nominally at full strength.

EA has just received approval to hire six additional auditors. The new vacancies will be promptly filled, according to EA management, and will nearly double the number of EA audit personnel. The staffing of EA has been a problem and was identified during the Engineering Assurance Performance Audit by NQA and EB. Audit Report No. QSS-A-86-0021.

2. Failure to Audit All Areas

NQA and EB have not had any findings in this area.

EA failed to complete all scheduled audits in fiscal year 1986. DNQA/NQA and EB documented the deficiency on CAQR KXF 870023 April 12, 1987. EA response to CAQR KXF 870023 has been transmitted to the DNQA on May 6, 1987 RIMS #B05 870506001.

3. Recurring Problems

NQA and EB has not had any findings in this area.

As a result of a NQA and EB audit of EA, Deviation Report BF-A-0002-09 was issued on February 6, 1986, for "failure to take required action to prevent recurrence of conditions adverse to quality identified on significant condition reports."

4. Response Time

Response time to, and closure of, audit deviations has been a long standing problem in the TVA system. The number of open audit deviations grew steadily in 1986. The trend finally reversed itself during the 2nd quarter of fiscal year 1987. (January 1, 1987 to March 31, 1987)

The total number of open audit deviations during this period decreased by twenty-five percent, from 216 to 161. The management attention given to this problem seems to be the reason for the favorable trend. The NQAM Section 2.16 "Corrective Action," Revision 2, January 4, 1987 provides an even stronger program for implementing corrective action with faster escalation of problems to upper management. This trend is being watched closely by NQA and EB and the Office of Nuclear Power is being kept informed, in accordance with NQAM Section 2.16, paragraph 16.2.

5. Audit Program Overview

The Nuclear Performance Plan provides a system of checks and balances, in that it calls for Engineering Assurance to audit NQA and EB annually and NQA and EB to audit Engineering Assurance annually. The Division of Nuclear Quality Assurance is to be audited by an outside independent agency annually. INPO will conduct annual corporate evaluations of the Nuclear Program until it is clear that the actions taken to strengthen the management and improve TVA's nuclear performance, have resulted in sustained satisfactory performance.

Many of the problems that existed prior to the implementation of the NPP still exist to some degree. However, the audit organizations are documenting their deficiencies and implementing corrective actions. Examples of these documents are: CAQRKXF870023 written for failure to audit all scheduled elements, DRBF-A-86-0002-09 written for failure to take required action to prevent recurrence of conditions adverse to quality identified on Significant Condition Reports; DR QWBA87006 01 written to document the failure of DNQA to implement the requirements of the Topical Report pertaining to an independent annual assessment of DNQA performance. These documents are indicative of an organization committed to strengthening itself.

Conclusion

The issue of audit program ineffectiveness is factual and identifies a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken (Class C).

Corrective Action

CATD 80112-NPS-01 was issued for tracking purposes to the Office of Nuclear Power to ensure that corrective action, once completed, provides sustained satisfactory compliance to 10CFR50 Appendix B, The TVA Topical Report, and the NPP.

The QACEG partial evaluation of the two nuclear audit groups has identified that not all problems have been solved as stated in items 1-4 above, but programs are in place to solve them. The organizations are identifying their own problems and taking meaningful corrective action. The staffing problems have been addressed and are being resolved.

3.4.4 Issue - QA management verbally instructed QA audit personnel to not write deviations against the QA program and/or procedures. (IN-86-255-006, XX-85-019-001, PH-85-018-001)

Specific Evaluation

This issue is generic and was evaluated at WBN and BLN. Manpower within the WBN site audit group peaked at 16 auditors. Of the 16, two are currently retired, three are currently working at offsite TVA offices, and three could not be located. The remaining eight were interviewed:

Manpower within the BLN site audit group peaked at 14 auditors. Of the 14, three have left TVA and three could not be located. The remaining eight were interviewed.

Discussion

Through discussions with eight individuals at WBN, who were in the QA Audit Group for various lengths of time between 1976 and 1986, four remembered verbal instructions to initiate procedure change requests rather than deviation reports when procedure deficiencies were discovered and four did not.

All individuals interviewed at BLN indicated that change requests were not initiated in lieu of deviations identified in the course of an audit, but were initiated when procedural conflicts were identified during the research involved in preparing for the audit. Audit procedures at the time would not have allowed procedure change requests to be initiated in lieu of audit deviations for violations identified during the course of an audit. All of the individuals interviewed reported they felt no QA Management pressure to suppress audit findings/deviations.

Conclusion:

The issue can not be verified as factual (Class A). Further based on the interviews conducted it appears that any verbal instructions given did not result in suppression of audit findings. Although, documented evidence could not be located to either confirm or disprove the allegation. A review of QA audits for 1983, 1984, and 1985 did reflect audit deficiencies written against the QA Program.

3.4.5 Issue - QA audit group failed to resolve a nonconforming condition. (OW-85-001-001)

Specific Evaluation

This issue is site-specific to WBN. Personnel interviewed were previously involved with the organization identified in the concerns or they were knowledgeable of the activities. Documents reviewed were as follows: QAPP-18, Revision 4, February 20, 1985 'Audits," TVA QA Topical Report (TVA-TR75 1A), Revision 8, QCP-3.06 3, Revision 7, "Inspection of Cable Termination," NRC's fifth "Systematic Assessment of Licensee Performance Report (SALP)," Nuclear Quality Assurance Manual Part III, Section 5.1, Revision 0,

June 20, 1986, Quality Notice, January 13, 1987. Black & Veatch (B&V) Report Finding F142 RIMS NO. QMS 841210203, TVA Nuclear Plant Auxiliary Feedwater System Independent Review Report, B&V Project no. 10520 April 12, 1983, Concern Report for XX-85-116-008 and XX-85-116-009 (SQN), and QA Audit Report WB A 85 03 "Instrumentation and Electrical Equipment and Systems," RIMS No. CQA 850122202, also reviewed were NCRs 4542R, WBN QMS 8401 and WBNP 58893.

Discussion

The initial nonconformance issued was that "The termination information on the documentation for cable 1-55P-3-662-B was in error and was not updated to reflect the actual cable configuration. The cable was installed correctly." This condition was reported on Construction NCR 4542R based on a B&V Design Report entitled "TVA Nuclear Plant Auxiliary Feedwater System Independent Review Report," Black and Veatch Project Report No. 10520, April 12, 1983.

The B&V report indicated the condition was generic at WBN. In order to determine whether the documentation problem for cable 1-55-P-662-B was isolated, the Task Force Compared 40 AFW, termination records to the termination diagrams. The TVA Task Force review of B&V findings reported that the condition was isolated based on a sample of other termination records.

This conclusion was stated in the WBN Review Supplement Report Appendix A Book 1, February 7, 1984 which was concurred with by the B&V Review Chairman R. E. Blaisdell, December 23, 1983. NCR 4542R was closed February 3, 1983 based on the identified corrective actions and the result of the TVA TAsk Force evaluation.

On December 7, 1984 the WBN Quality Management Staff (QMS) performed a surveillance to assess the adequacy of the conclusion that the licensing basis had been satisfied for B&V Finding F 142. The results of the surveillance indicated the implementation of corrective action for completed work was ineffective, and identified two concerns. The first is an Office of Engineering (OE) deficiency in that the shields of medium voltage cables are not shown on connection diagrams. This deficiency was documented on NCR WBN QMS8401 which required reconstruction of the termination documentation, clarification of the shield connection information, and revision of WBN-QCP 3.06 03. The NCR was closed on August 29, 1985. The second Office of Construction deficiency was related to the accuracy and completeness of information recorded on termination records and the proper tagging and identification for medium voltage cables. This deficiency was properly documented on NCR-WBNP-5889.

NOTE: NCR-WBNP-5889 was incorrectly identified on the Employee Concern Program computer printout as WBNT5885 which is for curing compound.

The disposition of NCR 5889 required corrective action in three areas as follows: The first required reconstruction of the documentation for termination of A and B phase on cable 1-5PP-62-562-B. The second required clarification of shield connection information on all medium voltage cable termination records such that it clearly indicates field configuration. The third required the Office of Construction, Watts Bar Nuclear Plant (OC WBN) to revise WBNP-QCP 3.06 3 "Inspection of Cable Termination," to add a disclaimer statement to indicate that termination records prior to this revision may not agree with installed configuration due to performance of the WBNP-QCT-3.06-5, "Motor Rotation Verification," and to indicate that this test verified proper termination. The Quality Control Procedure (QCP) required a new termination record for any cable lifted and retermination in a different configuration after issuance of the revised QCP.

NCR 5889 was closed on April 23, 1985 upon completion of this corrective action.

The disposition of NCR WBN QMS 8401 required corrective action in two areas. The first required issuance of a drawing that lists all the Construction Specifications which are applicable to the project and the second required a revision to drawing SD-E12.5.4 to require the extension of the grounding braid to ground unless indicated otherwise on design or standard drawings.

The above corrective action clearly imposed the requirements of Construction Specification G-38 which included sufficient information for grounding the subject cable shields. G-38 is not referenced by the connection drawings but is referenced by the Construction Requirements Manual (N3G-101) for installation of switchgear and cable.

NCR WBN QMS 8401 was closed on August 29, 1985 after completion of corrective action.

Conclusion

The issue can not be verified as factual (Class A). The review of the NCRs and discussion with QA Audit personnel revealed that proper documents were initiated to track and resolve the nonconforming conditions.

3.4.6 Issue - The project reference library does not contain sufficient reference material to perform quality surveys and the project does not maintain a project audit file. (WBN 0153, WBN 0157)

Specific Evaluation

This issue is site-specific and was evaluated at WBN. The review process included discussions with cognizant QA department personnel, a random check of documents contained in the reference library; review of the audit files and available reference material such as TVA procedures, and 10CFR50, Appendix B, Criterion XVIII (Audits).

Discussion

The QACEG evaluation determined that sufficient reference material and reports in support of quality activities were on file and readily obtainable. Additionally, the evaluation indicated that a system, "Tracking and Reporting Open Items" exists which contains inform on DRs, NCRs, SCRs, etc. The evaluation also concluded that a procedural tracking program was in effect at the time the concern was voiced and continues in use today.

Conclusion

This issue could not be verified as factual (Class A). Sufficient documents are on file both in the Reference Library and RIMs. Also, a system exists for determining the status of documents.

3.4.7 Issue - Audit deviation WB-A-85-05-D04 as originally written was an invalid finding. Office of Construction-Quality Assurance Branch (OC-QAB) disapproved the original response and rewrote the deviation which required four additional responses. (QCI-1.31-6-85)

Specific Evaluation

This issue was site-specific to WBN. The review of resolution for the QA Branch audit deviation WB-A-85-05-D04 included a review of applicable documents: Office of Construction-Quality Audit Branch Procedure-3.3. "Audit Process;" Office of Construction-Quality Audit Branch Procedure 3.2 "Deviation Reports, Management Action Requests, and Stop Work Orders;" and Quality Control-Quality Assurance Procedure 16.1, "Deviation Report Responses." Discussions were held with cognizant QA Department personnel.

Discussion

The evaluation disclosed that the original audit deviation condition was, in fact, an invalid condition as stated by the concern. At the time of the corrective action verification follow up, the initiating organization identified a totally different deviation than what was originally reported. The deviation report at this time was modified/revised by the initiating organization, identifying the different items, thus requiring further action by the responding organization. Although the existing audit procedures did not clearly address the action taken by the initiating organization, the subject was appropriately documented based on existing guidelines for controlling and processing deviation reports.

Conclusion

The issue of the resolution of audit deviations was verified as factual, but was not a problem (Class B). A review of audit program procedures to control and process quality deviations was found to be implemented as required.

3.5 Quality Assurance program authority, independence, Issues

3.5.1 Issue Excessive paperwork and procedures at the sites is the primary concern and not the quality of work. (BFN-86 002-001, MRS 85 001)

Specific Evaluation

This issue was generic to WBN, SQN, BFN, and BLN. The Topical Report, TVA TR75 1A, Revision 8, dated October 12, 1984, and Appendix B to 10CFR50, dated January 20, 1975, specify the requirements for a documented program to be established. The TVA NPP dated March 1986 was also reviewed as it describes management commitments related to this issue.

Discussion

The NPP addresses the TVA reorganization and commits to reviewing its procedural system as follows:

"In the past, all of the TVA departments responsible for nuclear activities have not been unified into a single nuclear organization. TVA's nuclear plants and headquarters departments have, at times, acted autonomously, and authority for functional activities was sometimes divided among several

groups. As a result, lines of authority and responsibility have not always been clear and the implementation of TVA's Nuclear Program has not been consistent." The NPP went on to discuss the planned corrective action.

"In response to these problems, TVA is reviewing its nuclear procedures and will be establishing centralized programs and procedures to control all TVA nuclear activities; TVA has assigned the Division of Nuclear Services with the responsibility."

Centralizing the TVA organization with corresponding actions to centralize programs and procedures should help streamline the overall system and should, when completed, assist in reducing redundant paperwork.

Conclusion

The issue is factual and identifies a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken (Class C). Although the amount of procedures and paperwork required within any nuclear power operation is significant and may still be considered burdensome by some personnel, the stated improvements, when implemented, should reduce the number of procedures and the amount of paperwork. The new procedural system is intended to provide the procedures necessary to assure that activities affecting quality are performed in a controlled manner and are documented properly.

Corrective Action

Corrective Action for this issue was initiated by the TVA when they began implementation of the NPP. The corrective action plan was both short term and long term:

(Short term) "TVA will prepare interim corporate-level nuclear standards for developing directives and procedures for each of the headquarters departments reporting to the Manager of Nuclear Power. These standards will be used to evaluate and revise all existing nuclear procedures on a site-by-site basis and will serve as a basis for preparation of final corporate level nuclear directives and procedures. Whenever possible, the interim standards will be based upon those provisions of existing procedures which provides effective control of activity in question".

(Long-term) "TVA will prepare and issue a Nuclear Power Directive, approved by the Manager of Nuclear Power, to define the specified objectives and responsibilities of the headquarters departments reporting to the Manager of Nuclear Power. Corporate-level directives and procedures will be developed or revised for each headquarters department. Plant-specific procedures will then be reviewed and revised on a site-by site basis to assure their conformance with the requirements in the corporate-level nuclear directives and procedures".

3.5.2 Issue -- Construction QA records do not provide evidence that testing is ever completed. (IN-85-401-001)

Specific Evaluation

This issue was generic to WBN and BLN. It was researched by reviewing BNP-QCP 9.2, "Transfer of Permanent Plant Equipment, Systems, or structures to the Office of Nuclear Power;" WBNP-QCI 1.22, "Transfer of Permanent Features to the Division of Nuclear Power," Revision 4.

Discussion

Discussions with cognizant personnel indicated that there were problems in the interface between DNC and NSD QA Records Units (QARU). For example, at WBN transfer of features with incomplete tests from DNC to NSD would be documented on a punch-list of Open Work Item Numbers (OWIN) in accordance with QCI 1.22 for later completion by DNC or NSD. The test cards would contain the statement, "this feature will be documented under the Nuclear Power QA Program," and would show a "%" to indicate that "no official documentation exists and evaluation has satisfied the installation. The evaluation statementdocuments acceptance." DNC would retain custody of this card for the "feature" and status would be "incomplete" in that no QA record existed in DNC QARU. When NSD performed the test the record did not get sent to DNC for insertion into their status program as an accomplished test for the feature. Thus, the DNC status program did not show its test completed although it did show the transfer status. The completed record, however, is entered into the NSD records and tracked using the OWIN.

Bellefonte is still in the construction phase and no plant equipment or systems have been turned over to the Nuclear Power Program. However, Quality Control Procedure BNP-QCP 9.2 "Transfer of Permanent Plant Equipment, Systems, or Structures to the Office of Nuclear Power," Revision 11, describes the methods to be used.

Conclusion

This issue is determined to be factually accurate at WBN but what is described is not a problem (Class B). Procedures and practices in place appear to adequately document the status of systems.

The issue at BLN is not factual. Turnover activities have not commenced but procedures in place are adequate to document the status of systems.

3.5.3 Issue: The TVA Office of Quality Assurance (OQA) did not have sufficient authority. (WI-85-29-001)

Specific Evaluation

This issue was generic to WBN, BFN, and BLN. The OQA was primarily an audit organization created to centralize the TVA QA auditing program. The effectiveness of the audit organization is addressed in this report in the audit section.

The question of the authority of the Office of Quality Assurance was researched by comparing 10CFR50 Appendix B, the TVA Topical Report, Revision 5, 6 and 7 and the DNC Quality Assurance Program Manual (QAPM). NSRS report #R-83-19-OQA Section V. A. "Office of Quality Assurance (OQA) Organization" was reviewed. QA Personnel were interviewed who worked within the TVA QA program during the time these concerns were raised.

Discussion

The TVA Topical Report, Revision 7 first addressed the OQA and delineated their responsibilities. Notification of Revision 7 was submitted to the NRC on July 11, 1983. OQA was considered functional from September 1982 to August 1984, therefore the scope of this evaluation was kept within that timeframe.

The reorganization of QA into the OQA in late 1982 satisfied the requirements of Appendix B to 10CFR50, Criterion I and II. In addition, Topical Report Revisions 5, 6 and 7, all delineate continuing changes within the QA organization and QA Program. Each was accepted by the NRC as satisfactorily meeting the requirements of Appendix B to 10CFR50.

Review of NSRS report #R-83-19-OQA Section V.A "Office of Quality Assurance (OQA) Organization "revealed that NSRS had concluded that the manager of OQA had the necessary authority to determine quality related issues, and to provide support to the QA staff. In the same report, NSRS concluded that OQA authority was recognized and accepted by TVA top management and by the TVA Office of Engineering Design and Construction Division Managers.

Prior to the OQA, under the Office of Engineering Design and Construction, the Chief, Construction QA staff was responsible for auditing the onsite QA program and the Chief, Engineering Design QA Staff performed audits of the design QA program. Discussions with personnel present in periods of programmatic changes have also indicated the belief that authority has always been in place, and that the OQA was no less effective than organizations and programs implemented prior to OQA. Those discussions were held with QA-oriented personnel.

Conclusion

The issue cannot be verified as factual (Class A). The decision by TVA to form the OQA in late 1982 acknowledged the need for an improved Quality Assurance program. The NRC acceptance of revisions to the Topical Report provides NRC acknowledgement that this new organization had the necessary authority and organizational freedom to meet the requirements of Appendix B to 10CFR50.

3.5.4 Issue - No QA organizational freedom to perform their organizational functions effectively. (XX-85-118-001, XX 85 019-X02, XX 85 094 009, WI-85-090-001, IN-85-347-004, IN-86-264-001, WBM-86-004-001, PH-85-018-X02, IN-85-926-001, IN 86-087-002)

Specific Evaluation

This issue is generic and was evaluated at WBN, BFN, SQN and BLN. 10CFR50, Appendix B was reviewed to establish the requirements for a QA program. The TVA Topical Report was researched to determine the licensing commitments of TVA. In addition, a review was performed of the NQAM, and applicable implementing procedures, and as discussions were held with cognizant personnel.

Discussion

Appendix B to 10CFR50, Criterion I, states in part, that "organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions". It also requires that persons and organizations performing QA functions shall have sufficient independence from cost and scheduling as opposed to safety considerations. A review of organizational charts has shown quality personnel to have the independence to meet the requirements of Appendix B to 10CFR50.

The evolution of the QA Program was a continuing refinement of the program. Each revision of the TVA Topical Report details the organizational hierarchy, administratively, as well as stating the responsibilities and commitments of each department. Each revision to the Topical Report established changes to the QA Program which led to a more independent organization. Even though the QA organization reported to the Site Director and was not fully autonomous in its reporting structure until the Division of Nuclear Quality Assurance was formed in 1986, the QA organization was sufficiently independent to meet regulatory requirements and the QA functions were being implemented.

Discussions held with cognizant personnel established that QA audits were conducted without restrictions being imposed by other site organizations. The site QA auditing group had a direct line of communication to the chief of the construction Quality Auditing Branch, with an indirect line to site management.

Conclusion

This issue cannot be verified as factual (Class A). The stated policy and published organizational charts, during the timeframe of the concern, empowered the quality organization with sufficient independence to meet the requirements of Appendix B to 10CFR50. Discussions with cognizant personnel confirmed the policies and organizational structure were as identified in the QA program.

3.5.5 Issue - NQAM program requirements not being incorporated into the site QC program. (WBM--86-004-002)

Specific Evaluation

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

The following documents were reviewed. NQAM, AI-3.1, Revision 11; AI 20, Revision 10, AI-34, Revised Nuclear Performance Plan for Sequoyah, July 1986; WB-CAR-86-16; Memo: from R. B. Kelly, Director, NQA to W. C. Drotleff, Manager of Engineering, on "Division of Nuclear Engineering Compliance with the Nuclear Assurance Manual," July 23, 1986 (L16 860723 855); various NCRs, CARs and DRs for the period of 1982 through 1986 and a sample of 16 SQN Audit Reports for the period of 1984 to 1986.

Discussion

The "Nuclear Performance Plan" states that plant-specific procedures will be reviewed and revised on a site-by-site basis to assure their conformance with the requirements in the corporate level nuclear directives and procedures.

The QACEG investigation found no instance where the Sequoyah Site had not incorporated the NQAM requirements into their QC Program.

QACEG's review of all CARs and Deficiency Reports (DRs) issued in 1982 1986, against the Sequoyah's Nuclear Plant Quality Assurance Organization (pertaining to Sequoyah's Quality Control Inspection Program) found no instance where the QC organization had failed to incorporate the NQAM requirements into the SQN plant instructions. The requirements of AI-20 "Quality Control Inspection" and AI-34 "Training and Qualifications of QC and Nondestructive Examination (NDE) Personnel" were reviewed by QACEG against the NQAM.

QACEG evaluated sixteen SQN Audit Reports for the period of 1984 to 1986. This review included Audit Report No. QSQ-A-86-0008, dated July 24, 1986, "Correction of Deficiencies and On Site Organization and QA Program" (RIMS L19860724903). Audit Report QSQ-A-86-0008 documents the evaluation by TVA of 23 Audits conducted at SQN for the period of May 1984 to April of 1986. The results of QACEG's evaluation of the sixteen Audit Reports and TVA's evaluation of twenty-three Audit Reports showed no evidence that NQAM requirements were not being incorporated into the SQN Site Quality Control Program.

The evaluation of these audit reports determined instances of failure to incorporate NQAM requirements into lower tier programs not within the scope of the SQN Quality Control Progam. These are addressed in the program improvements committed to in the Revised Corporate Nuclear Performance Plan, March 1986. QACEG verified that SQN has committed to revise its site procedures to assure applicable standards are incorporated into lower tier procedures including the QC program if applicable.

QACEG's investigation of Sequoyah's CARs and DRs with regard to the Quality Control Program not complying with NQAM found no evidence where deficiencies were written against this issue. Additionally QACEG's evaluation of sixteen Audits performed at SQN for the time period of 1984 to 1986 found no evidence where deficiencies were written against upper tier documents requirements not being incorporated into SQN's Quality Control Program.

At WBN, the Administration Instruction (AI) 3.1, Revision 11, paragraph 5.3.3, requires that "Project Quality Assurance shall verify compliance with the NQAM and QA program - related program procedures."

PQA review of procedures for compliance to the NQAM and QA program has been ineffective as evidenced by repetitive deviations, issued by various organizations other than PQA, against site organizations for transcribing of NQAM requirements incorrectly into applicable plant instructions. WB CAR 86 16 identified the cause as a dilution of PQA responsibilities due to revisions to AI-3.1, and overlapping job assignments which caused inattention to details during review cycles. Corrective action has been completed and verified and was closed on October 15, 1986.

At BLN, an evaluation of NRC audit findings, NCRs, CARs, DRs, and INPO Report for 1984 was conducted to determine if a problem with lower-tier procedures conflicting with upper tier documents existed. The following CARs and DRs indicated that this situation had occurred:

BLN CAR-83-14 , 08 11 83; BLN-CAR-85-08-, 04-25-85; BLN-CAR-85-10, 04-25-85; BLN-DR-83-100-R, 08-05-83; BLN DR 83 132 R, 10 25 83; and BLN DR-84-92 R, 08-30-84.

However, the corrective action or action to prevent recurrence given in the CARs and DRs are specific only to the condition reported. These conditions indicate a problem and there has not been a root cause evaluation or a generic review to see if the problem exists elsewhere and what preventive actions are necessary to preclude recurrence. As a result, CATD 80106-BLN-01 was written.

At BFN, a TVA Nuclear Performance Plan was submitted to the NRC with plant specific actions to correct problems in the management of TVAs nuclear activities. In June 1986, the present two volume NQAM was issued for implementation.

One of the significant changes of the rewritten QA manual was that the responsibility for the various Quality Assurance functions is consolidated under the Director of Nuclear Quality Assurance (NQA). Any site-specific adjustments are approved by the Director, NQA, to provide for site unique requirements based on the site needs. As an example, at BFN, twenty six QA Instruction Procedures have been issued to date. They provide specific instruction to implement the NQAM. General employee training of all personnel in quality awareness is ongoing. All employees are instructed to cooperate in implementing the NQAM.

Conclusion

The issue is factual at BLN and presents a problem for which corrective action has been, or is being, taken as a result of an employee concerns evaluation (Class C). The issue was factual but corrective action had already been taken at WBN and BFN. The issue was found not factual at SQN.

Cause

The QACEG discovered that corrective action of the CARs and DRs did not address root cause. The cause of this problem is attributed to inadequate implementation of procedure requirements.

Corrective Action

CATD 80106-BLN-01 was written because the corrective action or actions to prevent recurrence of the CARs and DRs written are specific, and do not address a root cause evaluation. There is no mechanism to assure TVA commitments made in upper-tier documents are transmitted into lower-tier documents.

BLN responded to the CATD referencing standard practice BLA 16.1 "Identification of conditions adverse to Quality and Corrective Action" and BLG3 "Program Procedure Manuals and Implementation Assignments." These procedures were in effect at the time of this evaluation. No corrective action is required. This corrective action plan has been accepted by QACEG as this was not a lack of adequate procedures but an implementation problem for which adequate corrective actions are being implemented.

3.5.6 Issue - Abuse of authority by site QC inspectors. QC inspectors constantly requiring engineers to justify procedural interpretations with supporting documentation as an attempt to prolong the job. (XX-85 081 001)

Specific Evaluation

This issue is site-specific and was evaluated at BLN. To perform an evaluation of this issue, discussions were held with engineers involved during the timeframe of 1981-1984 which was cited by the CI. Also, BNP-QCP 10.51, Revision 0, "Engineering Evaluation and Interpretations" was reviewed, though it was not approved until June 4, 1985.

Discussion

Engineering personnel stated that this issue should not be a quality related concern because QC was taking a conservative approach to the procedures by asking for engineering clarifications with appropriate backup data. At times, Engineering felt that QC inspectors were being unreasonable. Engineering personnel stated

that QC inspectors were actually assuring compliance to the QA Program and it was not a tactic to prolong the job as stated by the CI. Ballefonte Nuclear Plant Quality Control Procedure BNP-QCP 10.51 "Engineering Evaluation and Interpretations" was approved June 4, 1985 as a documented means for QC to ask for clarification from Engineering.

Conclusion

The issue cannot be verified as factual (Class A). Clarification of engineering specifications, procedures, drawings etc. for QC by engineering is practiced daily throughout the industry. To meet the intent of Criterion X of Appendix B to 10CFR50, QC inspectors may need clarification of governing documents from engineering. Procedure BNP-QCP-10.51 is used at BLN for the purpose of documenting clarifications by engineering.

3.5.7 Issue Lack of QA Engineer Independence. This issue questions the ability of an engineer to be unbiased when inspecting operations work and also working as a Shift Technical Advisor. (WBN-160)

Specific Evaluation

This issue was site-specific to WBN. It was evaluated by talking to the CI and his supervisor.

Discussion

The allegation is that it is impossible for a QA Engineer to perform his quality related job functions effectively, and also work with operations as a Shift Technical Advisor (STA) without being compromised. Discussions with both the CI and the QA Unit Supervisor revealed that this concern was only speculation of what could happen when the plant went operational.

Conclusion

The issue cannot be verified as factual (Class A). The CI stated that a meeting was held between management and the CI in which assurance was given that no retribution would occur as a result of this situation. As this issue was never anything more than speculation of what might happen, it cannot be verified as factual.

3.5.8 Issue - QC inspectors are performing peer reviews on previously inspected items. This is considered an unnecessary check or audit of inspector performance. (BNPQCP-10.35-4)

Specific Evaluation

This concern was site-specific to BLN. A review of in-house audit reports was performed and discussions were held with cognizant QC personnel to become familiar with the inspection audit process. This process is considered to be a "peer review" by BLN supervision, where a team of two inspectors (evaluators) perform a check on previously inspected items not yet turned in for final review. Quality Control Section Consistency Standard, QC-CS-001, "Peer Review," Revision 0, March 2, 1987 was also reviewed.

Discussion

A designated QC individual within each group; i.e., hanger, mechanical, etc., maintains the status of inspections performed, then randomly selects approximately five percent and assigns a team of two evaluators to perform a peer review of those inspections selected. If the peer review does not agree with the initial inspection, an in house audit form is completed documenting the discrepancy which is then forwarded to the appropriate supervision for review and comments. These audit forms are an in-house document used by supervision to identify areas where inspectors may require additional training.

The peer reviews are conducted at the direction of QA Management and were not governed by any procedures at the time of this evaluation. Quality Control Section Consistency Standard, (QC-CS-001) "Peer Review" Revision 0, March 2, 1987, was generated to standardize the peer review process. Discussions with the cognizant QC personnel revealed that the quality of their inspections as well as that of the plant is improved with the peer review.

Supervision has utilized the peer review as a tool for improving performance. In addition, the use of the in-house audits as an aid to record discrepancies between inspections does not violate Appendix B to 10CFR50.

Conclusion

The issue cannot be verified as factual (Class A). The peer reviews are used by supervision to improve the quality of inspections performed. These reviews are not documenting in process inspections, but are used to verify inspections performed and improve performance.

3.5.9 Issue No adherence to codes. Compliance to codes was not emphasized until the plant was nearly complete. (IN-86-255-X07, IN 85 001 N09)

Specific Evaluation

This issue is site-specific and was evaluated at WBN. The evaluation consisted of a review of NSRS Report R-81-28-WBN, "Mini Management Review - 1981"; NPP Revision 4, Section VI.C.3; the Topical Report; FSAR; AI 3.1, "Site Procedures and Instructions, Preparation, Review and Approval"; NQA and EB QWB-A-87-0006, "Onsite Organization and QA Program"; and NRC Inspection Reports 390, 391, 187-05 dated June 9, 1987.

Discussion

A review of the QTC File by the NRC prompted this concern which alleges that adherence to codes was not emphasized until 70 to 80 percent of the plant was built and then only to allow it to appear as if this was occurring during the life of the plant.

NSRS Report R-81-28-WBN revealed several findings which were indicative of a lack of emphasis on codes and standards. For instance, finding R-81-28-WBN-1, "Training and Qualification of Personnel", states that a training program had not been developed for QC inspector and engineering personnel. . . ." This finding is contrary to the requirements imposed by Criterion II of Appendix B which requires that training and indoctrination of personnel performing activities affecting quality be conducted. Findings R-81-28-WBN-2 and 3, "Inspector and Engineering Unit Personnel Demonstration of Practical Knowledge," states that neither group of individuals were required to demonstrate their practical knowledge of training they had received to the examiner. Finding R 81 28-WBN 5 "Inadequate Training Program" states that site and division level procedures do not clearly establish training requirements for all persons who perform quality related activities.

NSRS Report R 82-02 WBN, "Major management Review of WBN," identified that the quality program at WBN was less than adequate because of deficiencies identified in the design process controls, training and qualification of personnel, special process controls. These two reports, issued in late 1981 and early 1982, constitute an overall assessment of the management control systems as they relate to nuclear safety/quality during the design and construction of WBN. At this time Unit 1 was considered to be 70% to 80% complete.

The NRC has specifically requested that TVA provide a description of their program for compliance with all the ANSI standards committed to in the FSAR and the Topical Report.

The response by TVA to NRC Region II Inspection Report 390, 391/87-05, dated June 9, 1987, (L44 870618 806) states that this requirement is implemented in NI 3.1. TVA has developed matrices for applicable ANSI standards for Design and Construction, and Operations. These matrices contain a line by line review of how the requirements from the ANSI Standards are reflected in site implementing procedures. TVA is presently in the process of completing this review and CAQRs will be issued as required.

In addition to verifying site implementing procedure compliance to ANSI, TVA committed to verifying FSAR commitments to ANSI standards affecting design. Any failure to properly capture and specify each commitment will be evaluated for its impact on plant design and corrected as appropriate. Furthermore, a cross referencing matrix will be developed between each ANSI commitment and the highest level design document which implements the commitment.

Conclusion

The issue is factual and identifies a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken. (Class C)

TVA committed to comply with specified codes in the WBN SAR which forms the basis for NRC issuance of a construction permit for WBN. These commitments changed during the construction phase, but there was no centralized system to track these changes for submittal to the NRC nor to track commitments made to the NRC to ensure timely implementation. An increased awareness of licensing commitments is inherent upon issuance of the FSAR and commencement of the plants final licensing activities.

QACEG found no evidence to indicate that the increased emphasis on codes in the latter phase of the project was intended to make it appear that similar attention to codes was present earlier.

Corrective Action

The TVA has taken corrective action to address each problem that has presented itself since Construction started at WBN. The NQAM was rewritten and the Topical Report revised to strengthen the Quality program. The NPP of 1986 was implemented as a major corrective action to correct the problems of the TVA Nuclear program from top to bottom. The implementation of the NPP has produced positive results within the TVA system. CATD 80109-WBN-02 and CATD 80109-WBN-03 were written to track the completion of the requirement review matrices.

3.5.10 Issue - NCR Dispositions are questionable. (In-85-134-N06)
Specific Evaluation

This issue is generic and was evaluated at WBN, BLN, BFN, and SQN. It was evaluated by examining several NCR and FCR dispositions and audit findings.

Discussion

At WBN, a review of QTC report IN-85-134-005 by the NRC prompted this concern to be written by the Employee Concerns Task Group in response to the NRC comments. The QACEG evaluation has revealed that an audit deficiency, 86-27-01, was identified during an audit of the WBN Engineering Project (WBEP) by the ONE EA group in September 1986. This audit documented deficiencies in WBEP activities related to the handling of construction NCRs. These deficiencies include:

1. "Use-as-is" and "repair" dispositioned NCRs are not tracked against the affected design documents.

2. "Use-as-is" dispositioned NCRs that come under the ASME code but are identified as "not requiring a drawing change" do not meet ASME code requirements because the NCR cannot be linked to the "as-built" drawing configuration.

3. Many "use-as-is" dispositioned NCRs do not have any justification or have insufficient detail.

4. There does not appear to be any project procedural guidance for the handling of NCRs to be dispositioned "use-as-is.".

This deficiency has been escalated to a SCR WBN-WBP-8601, Revision 0 and is fully discussed in the Engineering Category Evaluation Group Report 207. SCR WBN-WBP-8601 was distributed for "Potential Generic Condition Evaluation" to the BFN, BLN, and SQN projects. (RIMS B26861023016)

During the evaluation, a related problem was identified which addressed the accuracy of FSAR information. SCR GENNEB 8602 was written to address the accuracy of FSAR information. This concern arose during the recent implementation of Special Engineering Procedure, WBEP 85 01, which revealed discrepancies that exist between WBN FSAR and design documents.

In both cases cited above, the lack of a project or division level procedures containing requirements for handling NCRs, was a contributing factor.

Procedures WBEP 3.05, "Conditions Adverse to Quality Reports and Problem Identification Reports, RO, and WBEP 9.01, Maintenance of FSAR," RO have been issued by ONE-WBEP. These procedures deal with corrective action to prevent recurrence and FSAR maintenance.

At BFN, the Division of Nuclear Engineering performed a generic condition evaluation of SCR WBN-WBP 8601 covering NCR dispositions. It was determined that the same condition existed at BFN. QACEG issued CATD-80106-BFN-01 to determine what action was taken by BFN to resolve this problem condition.

QACEG also evaluated the related condition of FSAR accuracy. It was determined by QACEG that the Division of Nuclear Engineering Branch Licensing had issued a draft PIR NCR BFNNEB 8502, May 9, 1985. The draft PIR stated in part, that the condition reported by NCR BFNNEB 8502 was closed without proper corrective action. Corrective action did not provide any procedural control to assure as configured drawings are incorporated into the Updated Final Safety Analysis Report (UFSAR). NCR BFNNEB 8502 describes a condition where the BFN UFSAR did not accurately reflect the "as constructed" configuration of the plant. CATD 80405-BFN-01 was initiated April 7, 1987 to track corrective action. It was determined that a programmatic concern exists regarding the accuracy of FSAR statements for all TVA plants as stated in SCR GENNEB 8602.

BLN Engineering performed an evaluation and found that the condition of improperly dispositioned NCRs exists at BLN. As a result, Problem Identification Report (PIR) BLN BLP 8606 was generated to track the condition at BLN.

A discussion was held with the engineer responsible for the disposition of the condition reported in PIR BLN BLP 8606 pertaining to any corrective action that may have taken place. It was stated by the engineer that there has been no corrective action taken on this condition. The PIR has been put on hold and is currently being held open in the Tracking and Reporting of Open Items (TROI) information system. CATD 80106 BLN-04 has been written to track the closing of PIR BLN 8606.

At SQN Engineering determined that the condition of improperly dispositioned NCRs exists there. The condition is being addressed by CAQR SQP870236 RO.

Conclusion

This issue is factual and identifies a problem but corrective action for the problem was initiated before the employee concerns evaluation was undertaken (Class C). Audit deficiencies, SCRs, and other Category Evaluation Group reports indicate that NCRs were improperly dispositioned. The extent of the problem will be determined by a TVA evaluation of "use as is" dispositioned NCRs.

Corrective Action

At WBN, all "Use-as-is" dispositioned NCRs are presently being reevaluated to assure compliance to FSAR requirements and are being tracked against SCR GEN NEB 8602 and CAQR WBT870165. CATD 20720-WBN 05 was written by the engineering CEG to track completion of these items.

At BLN, PIR BLN BLP 8606 was issued to track improperly dispositioned NCRs. Also CATD 80106-BLN-04 has been written to track the closing of PIR BLN 8606. CATD 80106-BFN-01 was written at BFN to determine what action is being taken to resolve the problem condition. Project Engineering stated that the concern would be tracked and resolved in accordance with CAQR BFP870625. QACEG concurred with the CAP.

At SQN, the condition is being addressed by CAQR SQP870236 RO.

3.5.11 Issue Construction evaluates QC identified deficiencies away (IN-85-347-009)

Specific Evaluation

This issue is site-specific to WBN. This issue was evaluated by review of QTC report IN 85 347 009, SCR GEN NEB 8602, and CAQR WBT 87 0165, and Topical Report TVA-TR75-1A Revisions 6 through 8.

Discussion

The Construction Engineer, whose role is defined in the Topical Report (TVA TR75-1A) Revisions 6 through 8, was TVA's site construction quality representative on a nuclear job site. The Construction Engineer also provided technical guidance to crafts and services; recorded, coordinated, and channeled design deviations through the Division of Engineering Design (EN DES); and interpreted EN DES specifications and tolerances for the Field Engineers and their staffs, which formerly included Quality Control inspection personnel who performed acceptance inspection of various plant features.

According to a QTC Report, IN-85-347-009, upper-tier documents allowed evaluation of failures, malfunctions, deficiencies, deviations, nonconformances and Quality Assurance records. The TVA Topical Report TVA-TR75-1A Revision 7 and Revision 8 stated that the Construction Engineer was the initial evaluator of these discrepancies which, based on his position and responsibilities, enabled him to accept discrepancies identified by QC inspection personnel. QACEG Subcategory Report 80400 Nonconformance Control/Corrective Action," discusses the issue of erroneous and improper disposition/evaluation of the identified discrepancies.

QACEG performed a random review of closed IRNs and found instances where problems were resolved without technical justifications. CATD 80400-WBN-06 has been written addressing closed IRNs (Unit 2) where the IRNs were dispositioned by Construction Engineering without proper justifications or reference to inspection acceptance criteria.Note: CATD 80400-WBN-06 only covers unit 2 because IRNs were not required to be retained as Life of Plant (LOP) documents for Unit 1. CATD 80400-WBN-02 has been issued addressing closed IRNs with numerous discrepancies with the dispositioning, voiding and closing of IRNs with a persons initials or by memos. Others were closed with statements such as "waived per EEU" with no apparent justification and some voided without justification or the identity of who voided the IRNs.

All "use-as-is" dispositioned NCRs are presently being reevaluated to assure compliance to FSAR requirements and are being tracked against SCR GENNEB 8602 and CAQR WBT870165. CATD 20701-WBN 05 was written to track these items.

With the reporting structure and responsibilities of the QC and construction organizations along with the documented problems with NCRs and IRNs being improperly dispositioned by the construction organizations, it appears that construction had evaluated away some identified discrepancies.

Conclusion

This issue was found to be 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).

Corrective Action

CATD 80400-WBN-06 and CATD 80400-WBN-02 were written to address IRN's which were closed without proper technical justification. CATD 20701-WBN-05 was written to track SCR CENNEB 8602 and CAQR WBT870165 which document the need to review all "use-as-is" dispositioned NCRs. The extent of the problems and necessary corrective action, if any, resulting from the evaluation will be determined by TVA.

3.5.12 Issue - Inadequate implementation of IEEE 336-85 (Nuclear Instrumentation Department.) (WBN-0162)

Specific Evaluation

This issue is generic and was evaluated at WBN, SQN, BLN, and BFN. The following documents were reviewed in evaluating this issue. WBEP 3.05, Revision 0 "Conditions Adverse to Quality Reports and Problem Identification Reports", WBEP 9.01, Revision 0 "Maintenance of FSAR" Employee Response Team (ERT) Report IN 85 134 005, SCR WBN WBP 8601, October 23, 1986, Problem Identification Report for NCR BFNNE 8502, May 9, 1985, SCR CEN NEB 8602, March 17, 1986, DNE Audit 86 27 (RIMs B05 861014 003), SCR WBN WBP 8601, Problem Identification Report (PIR) BLN BLP 8606. Memo: Chief, Quality Systems Branch (RIMs L16 860227 882), February 27, 1986. Corrective Action Report WB-CAR-86-47, Employee Concerns ECP-86-WB-559-01, NQAM, Part I, Section 3.3, and Part II, Section 5.3, Nuclear Central Office, Corrective Action Reports (NCO-CAR)-87-002-R, and NCO-CAR-86-014-R, CAQR CHs-87-0017, and CAQR WBQ 87-0470, WBN Instruction IMI 92-4" Assembly Instruction for Triax Connectors". Discussions with the Employee Concerns Program (ECP) revealed that this issue, had been responded to by the Chief, Quality Systems Branch (L16 860227 882) on February 27, 1986. This memorandum stated that:

A) All TVA Nuclear Plants are committed to implement Safety Guide 30 and ANSI N45.2.4-1972/IEEE 336-1971 with the exceptions listed in the Topical Report. This commitment can be traced back to Revision 0 of the Topical Report dated April 1976.

B) An inspection program to verify compliance with ANSI N45.2.4 is required as a part of the commitment and should now be in place.

C) WBN should perform an evaluation of the existing site procedures to determine if the requirements for inspection of ANSI N45.2.4 related activities are being met. Procedural changes should be initiated to correct any identified deficiencies.

This memorandum also stated that the Quality System Branch (QSB) reviewed the ANSI N45.2.4 matrix and NQAM and did not identify any areas where the NQAM was deficient.

Discussion

CAR WB-CAR-86-0047 was generated for the failure of Instrument Maintenance to comply with IEE 336/American National Standards Institute (ANSI) Standard N45.2.4 "Installation, Inspection, and Testing Requirements for Power, Instrumentation, and Control Equipment at Nuclear Facilities" at WBN. The CAR was distributed for "Potential Generic Condition Evaluation" to Bellefonte, Sequoyah, and Browns Ferry (RIMs L16860718839).

Instrument Maintenance review of the CAR stated that there had been no specified (written) requirements, procedures, instructions, or regulations violated. Therefore, the CAR was invalid and should be voided (WB-CAR-86-47 was invalidated because the NQAM was inadequate in that it did not require ANSI N45.2.4 inspections). However, further investigation is to be conducted by the current Employee Concerns Program under ECP-86-WB 559-01.

Another instance of failure to have an adequate inspection program which complies with ANSI N45.2.4 was found in CAQR WBQ-87-0407, which addresses work on Class IE cables with inadequate inspection hold points. The IMI used to inspect the cable installation did not have sufficient holdpoints to meet the original design inspection requirements. This instruction, IMI 92-4, "Assembly Instruction for Triax Connectors," had been previously identified in CAR 86-47 as being inadequate and had had a statement incorporated into it to prevent its usage until it had been revised or cancelled.

In parallel with the efforts on CAR-86-0047, the Division of Nuclear Quality Assurance Quality Auditing Branch (DNQA-QAB) cited BLN Maintenance Staff with deviation QBL A 85-0002 D01 (RIMs L17850522800). The deviation addressed inadequate QC holdpoints in the Maintenance Instruction (MIs). This audit deviation was closed for the same reason as WB-CAR-86-0047, in that the NQAM was inadequate because it did not require ANSI N45.2.4 inspections.

DNQA-QSB recognized a deficiency in NQAM Part II, Section 5.3 and issued NCO CAR 86 014-R which addressed the NQAM deficiencies relating to routine and nonroutine maintenance. After implementation of corrective action, the CAR was closed. However, Revision 1 to Part II, Section 5.3 (Maintenance an Modification Inspection Program) of the NQAM, removed or modified requirements incorporated as part of the corrective action used to close NCO-CAR-86 014-R, so CAQR CHS 870017 was initiated to document the dropped or modified commitments. At the time of this evaluation, CAQR CHS 870017 was open for corrective action to be developed.

NCO CAR 87 002 R was initiated by the DNQA-QSB in December of 1986 addressing the issue, where the NQAM Part II, Section 5.3 does not address the requirements of ANSI N45.2.4 as delineated in Part I, Section 2.10 of the NQAM. It also states that other ANSI requirements as delineated in Part 1, Section 2.10 of the NQAM should be investigated for similar generic problems. A draft copy of the proposed corrective action to NCO-CAR-87-002-R was located, but a final accepted corrective action was not signed at the time of this evaluation.

Conclusion

Based on the QACEG evaluation, this issue is factual and identifies a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken (Class C).

Corrective Action

This issue is currently being addressed and tracked throughout TVA. CATD 80109-NPS 01 was issued to DNQA to track the closing of concern ECP-86-WB-559-01. DNQA has responded by stating that NQAM, Part I, Section 2.10 is being revised to address the specifics of the quality control inspection program. CATD 80109 NPS 02 was issued to DNQA to track the closure of NCO-CAR-87-002-R. DNQA has stated that interim inspection plans have been revised to comply with ANSI-N45.2.4. Also a proposed revision to NQAM, Part I, Section 2.10 has been developed and awaiting review. This revision addresses inspection plans and delineates responsibilities at all sites for effective implementation. CATD 80109-NPS-03 was issued to track the closing of CAQR CHS870017 by DNQA. DNQA replied that NQAM, Part I, Section 2.10 is being revised to place the responsibility for determining inspection requirements for modifications and major

maintenance with the site quality manager. Inspection plans will define inspection requirements for specific work applications at all sites. CATD 80109-WBN-04 was issued to WBN-QA to track the closing of CAQR WBQ-87 0407. WBN-QA has responded by stating that IMI-92.4 will be revised to incorporate inspection criteria equivlent to the original installation instruction contained in QCP-3.17. QACEG has concurred with the above CAPs.

3.5.13 Issue -- No procedures for data entry operations regarding QA records (IN 85 712 X01)

Specific Evaluation

This issue is site-specific and was evaluated at WBN. It was evaluated by researching the procedures in place for record control and Data Entry (QCI-1.8, Revision 0, QCI-1.08, Revision 0, QCI 1.40, Revision 0, WBN Standard Practice 3.2.1, and AI-4.1). Conducted interviews with cognizant personnel from QA, Engineering Assurance (EA), Employee Concerns, and the NRC.

Discussion

A review of Construction QCIs revealed that measures have been in place to control QA records since June 1975. A review of NUC PR Standard Practices and discussions with cognizant personnel revealed that measures have been in place to control QA records generated by NUC PR since January 1981 when the NUC PR records unit was formed. More specifically, the sequence of measures to control QA records has been:

QCP 1.8, Revision 0, "QA Records," was issued on June 10 1975 and was superseded by QCI-1.8; QCI-1.8, Revision 0, "QA Records" July 31, 1980 (WBN 820730 984) to address handling of QA documentation during construction; QCI-1.08-1, Revision 0, "Records Retrieval," was issued on May 15, 1984 to address records retrieval of QA documentation at WBN, which was formally addressed in QCI 1.8; QCI 1.40, Revision 0, "Records Accountability Program" was issued on May 20, 1981 to address responsibilities and methods to generate QA records; QCI-1.40-2 through 7 are instructions which are more specific for the various discipline records accountability programs; WBN Standard Practice 3.2.1, "QA Records", was issued on January 18, 1981 and later superseded by AI-4.1; AI 4.1, Revision 0, "QA Records," was issued on March 3, 1982; and Section Instruction Letter ADS-07, November 14, 1985, "Records Indexing and Data Entry," provides further detailed instructions which prescribe format, entry, and retrieval of data into NUC PR QA records database.

Conclusion

This issue could not be verified as factual (Class A). There have been measures to control QA records including data entry since 1975 for Construction and, since 1981 for NUC PR, when NUC PR was organized as a separate entity from construction.

3.5.14 Issue - Inadequate implementation and verification of QA program commitments and procedures. (IN-85-347-003, In-85--682-003, IN-86--255-004, PH-85-014--001, WBN-0161, IN 85 886 X02).

Specific Evaluation

This issue is site specific to WBN. Employee Concern, NSRS, and QTC Files were reviewed.

Discussion

The review of the Employee Concern, NSRS, and QTC Files failed to produce any additional information. The information available to QACEG lacked the specific details necessary to perform a meaningful investigation.

Conclusion

This issue could not be verified as factual (Class A).

3.6 Quality Assurance Effectiveness/Decentralization

3.6.1 Issue -- An inadequate QA organizational structure as it relates to the independence of QA personnel. Since QA site staff reports functionally to plant management, this reporting relationship would lessen the effectiveness of QA as an independent reviewer. The TVA decision to "Decentralize" the QA audit branch violates regulatory requirements and the TVA approved QA program.

(IN 86 095-001, WI-85 086-003, XX-85-113-001, PH-85-056-X02, WI-85-086-004, XX-85-113-002, WI 85 086-001, WI-85-090-002, XX-85-113-003, WI-85-086-002, WI-85-090-003, XX-85-119-001)

Specific Evaluation

This issue was generic to WBN, SQN, BFN, and BLN. NSRS Reports I 85 420-WBN, dated November 19, 1985 and I-85-805--NPS dated November 18, 1985 were issued and addressed the independence of the QA Department. NSRS Report, I-85-420--WBN, was issued specifically for WBN; however, the ECTG has determined this issue to be generically applicable. Also reviewed was the QA Auditing Branch correspondence files for additional information relating to decentralization of the auditing functions. Additionally, discussions were held with the former Director of QA, the Branch Chief of QA Audit Group and Section Supervisors to develop background information and other specific details relating to the issue.

Discussion

This background information is provided to discuss the history of the reporting relationship of the QA Department and the Operation Site Director during the time 1984 through 1986. In February 1984, the Power Operations and the Engineering and Construction functions were merged into the newly formed organization called the Office of Power and Engineering. Under the new organizational structure, TVA introduced the management philosophy of the Owner/ Operator concept with full responsibility for the performance of those facilities which they operated. Additionally, this concept was to establish a "Decentralized" method of operations for each of the TVA nuclear plants with each nuclear plant developing its own programs and systems to control plant activities.

The Topical Report, Revision 8, was revised by TVA and accepted by NRC in October 1984 as satisfactorily meeting the requirements of Appendix B of 10CFR50.The QA Audit Branch under the new "Decentralized" structure for TVA was in the transition phase in Decembe of 1985. A memorandum (L17 851212 800) from the Director of QA to "Those listed", dated December 12, 1985, indicated that the decentralization of the QA Auditing functions for operating plants had not been fully implemented at that time. The program to decentralize the audit group ended during the reorganization of the QA Department in early 1986 which is discussed below.

A number of CIs expressed their concern that the organizational structure relative to the independence of QA personnel was a requirement violation. The term "independence" as referenced in the Code of Federal Regulations 10CFR50, Appendix B, Criterion I, requires that persons and organizations performing QA functions shall have sufficient independence from cost and schedules as opposed to safety considerations. The acceptance of the TVA Topical Report by the NRC in October 1984 as satisfactorily meeting the requirements of Appendix B to 10CFR50 endorsed the organizational structure.

Since early 1986, TVA has been involved with the reorganization of the nuclear QA functions (as well as other functions) under The Office of Nuclear Power. The responsibility for all nuclear QA functions in the Office of Nuclear Power, including QA/QC activities relating to engineering, construction, and operations, has been consolidated under the Director of Nuclear QA. TVA has developed a standardized Nuclear QA Program described in the revised Topical Report, Revision 9, and also the revised NQAM which includes QA/QC activities relating to plants under construction and plants holding an operating license. These programmatic measures eliminate the "owner/operator" and "decentralization" concepts. This allows TVA to attain a centralized responsibility for Nuclear QA/QC functions which will report to a high level of management in accordance with a standard program. NRC acceptance of the Topical Report Revision 9 was received January 30, 1987.

Conclusion

The issue cannot be verified as factual (Class A). The TVA decision to decentralize the QA Department was part of an overall program to decentralize all activities including QA in 1984, and was approved by the NRC as meeting the requirements of 10CFR50, Appendix B. Presently, the nuclear QA/QC functions have been unified under a single department with a consistent nuclear QA program and procedures for all TVA nuclear sites.

3.7 Quality Assurance Management and Policy

3.7.1 Issue Cost and schedule considerations overrule quality considerations. Time and accountability records were used to unduly speed the inspection process and to determine merit pay increases SQN-86-035-003, WI-85-046-01).

Specific Evaluation

This issue was generic to WBN, SQN, BLN, and BFN. The evaluation consisted of a review of 10CFR50 Appendix B, current and past practices, pertinent procedures such as PQA AIL 4.2 and QMI 800-11 as well as interviews with various inspection personnel.

Discussion

In this issue, the CIs allege that by having ISI inspectors fill out individual time sheets and recording their inspections in logs that the inspectors are performing a production function and this is a violation of 10CFR50 Appendix B. It was also charged that the number of inspections performed was being used to determine merit raises.

The QACEG evaluation revealed that inspection statusing, wherein inspection completion was recorded in a log by the inspectors, is required by PQA SIL 4.3. This log permits the identification of the number of inspections completed by an individual, thereby giving rise to the fear that it was to be used for evaluation purposes in connection with merit raises.

The TVA program for Employee Appraisals, QMI 800.11, Revision 0 was reviewed and it does not include any evaluation parameters that would be detrimental to quality.

Twenty-one Inspectors and supervisors from various QA/QC disciplines/groups were interviewed. Only one individual recalled that his 1986 review referenced the number of inspections he had made, but could not say what impact it had on the review results. All other individuals did not feel there was any basis for this concern.

For administrative purposes Inservice Inspection (ISI) personnel were required to complete a new by-weekly time report in place of the previously required weekly time report. The utilization of the bi-weekly time report was instituted by the Manager Maintenance and Engineering, per memorandum (L25 85220801) dated 12/20/85, for the purpose of reporting time under new service agreements.

Conclusion

The issue can not be verified as factual (Class A). Time reporting is a valid business practice and not in conflict with the objective of attaining good quality. Similarly, inspection statusing is a required activity and the evaluation program contains no parameters adverse to quality.

3.7.2 Issue Inadequate supervision of QC inspectors as evidenced by poor work practices on the part of the inspectors and failure to audit inspector's work. QC supervisor not willing to work cooperatively. (IN-86-161-001, WI-85-046-004, IN 85 652 001)

Specific Evaluation

This issue was site-specific to WBN. The issue was evaluated by interviewing construction and QC personnel and by reviewing applicable procedures such as SOP-QMO-03, QCP 4.03 1, QCP 1.08, and documentation such as the INPO report CP-85.02 issued June 1985.

Discussion

INPO finding QP 3.1 issued June 1985 states that quality inspections sometimes do not ensure that hardware was installed in accordance with design. Some previously inspected and accepted items were determined to contain deficiencies. Some inspectors were noted not fully complying with inspection procedures. In some cases, the acceptance criteria have not been provided or are not clearly understood. The INPO recommendation was to implement controls to ensure that QC inspectors were performing adequate inspections by increasing supervision's involvement through monitoring of inspection effectiveness and providing additional training as necessary.

In response to the INPO finding, WBN Quality Control Department developed a "Quality Control Reinspection Program," SOP-QMO-03, Rev. 0, dated 5-19-86. This procedure outlines the WBN Construction QC reinspections to be performed on accepted inspections on a random basis, so that each inspector's work is examined regularly. Problems found will then be discussed with the responsible inspector and training provided if necessary.

Before the issuance of SOP-QMO-03, there was no requirement to audit the inspector's work. However, during the investigation, QACEG discovered that four of the six inspection sections, Welding, Electrical, Instrumentation and Hanger, were not performing audits of inspector activities as directed by SOP-QMO-03. For this reason, CATD 8011-WBN-01 was issued.

The problem relating to the lack of cooperation between QC supervision and Electrical Construction Group resulting in each group maintaining cable pulling and termination records was investigated. The cable pulling and termination records are included in the completed work packages as Life of Plant (LOP) documents. However, the electrical superintendent elected to retain duplicated copies of the cable pulling and termination records for statusing the electrical work-load. The provisions of QCI-1.08 require that completed records indicating an acceptance or rejection of an inspection function of safety-related activity will be a QA document to be retained at DCU for the LOP. However, the duplicate cable pulling and termination inspection records maintained by the Electrical Superintendent do not violate site QA procedures. The superintendent advises that maintaining these records has not created a burden on his organization.

Also, a discussion with a Steamfitter General Foreman indicated that he did not know of any incident where QC management alienated QC Inspectors which then caused hangers to be rejected for petty items. In particular, he could not recall the incident where a QC Inspector rejected a hanger for having a red pencil mark on it.

Conclusion

Based on QACEG's evaluation, review of pertinent documents, and discussions with cognizant personnel, the issue that QA/QC supervision of inspectors was inadequate is factual and presents a problem for which corrective action is being taken as a result of the employee concern evaluation (Class D).

Causes

QACEG discovered that the procedure SOP-QMO-03 for auditing inspectors work was not being implemented in all Quality Control sections. The cause is a failure to follow procedures.

Corrective Actions

CATD 80113-WBN-01 was issued to WBN Quality Control to document that not all QC sections were following procedure SOP-QMO-03. The approved Corrective Action Plan states that a letter was sent to all QC sections instructing them to comply with the procedure until such time that the procedure was revised or revoked.

3.7.3 Issue - Poor leadership by a QC supervisor resulting in low morale and discontent among inspectors. (BFNIESC-85-02)

Specific Evaluation

This issue is site-specific and was evaluated at BFN. It was documented in a TVA memorandum (R32 860602 881) from the Site Quality Manager to the Director of Quality Assurance. The issue was evaluated on the basis of the memorandum, interviews with site personnel, and review of the BFN NPP.

Discussion

The issue of poor leadership by a QC supervisor, resulting in numerous problems in the QC unit is identified in a TVA memorandum from the Site Quality Manager to the Director of Quality Assurance, June 6, 1986. The subject QC supervisor has been removed from the QC unit and transferred to another department. The TVA BFN Nuclear Performance Plan (BFNPP), Volume 3, identified taking steps to restore employee trust in nuclear management, programs to ensure employee confidence, programs to improve communications with employees, and commitments to revise and improve the QC inspector qualification and certification programs. Quality Method Instructions (QMI) 602.2.1, revision 0 (Draft form) is being processed for the indoctrination, training, and certification of site QC personnel. In addition, the NPP was revised to establish methods for employees to communicate with management without fear of reprisal.

The QACEG discussions with the BFN site Quality Manager, QC supervisors, and inspectors disclosed that TVA has taken steps to improve employee relations.

Conclusion

The issue is factual and identifies a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken (Class C).

Corrective Action

The BFNPP is a commitment by TVA to the NRC to improve and correct past problems at BFN. The QA/QC program has been reorganized and new supervisors have been appointed. Discussions with QC personnel revealed that personnel changes made by TVA have improved the QC unit, and that an open door policy is now in effect.

3.7.4 Issue - Management/Supervision was not responsive to quality concerns, not supportive of quality or adversely influenced inspection efforts as a result of personnel/policy changes. (HI-85-082-001, HI 85-103-001, IN-85-547-001, IN-85-846-003, IN-85-978-012, WI-85-058-001, and WI-85-059-001)

Specific Evaluation

This issue is site-specific to WBN. The Management Personnel Evaluation Concern Group (MPCEG) has issued two subcategory reports (71700 and 70600) which addressed supervisory skills and training, management practices and commitments to quality. QACEG evaluation included a review of the MPCEG reports and interviews with inspection personnel from various disciplines and management levels to determine their perception of management and supervision performance relative to the issue, and to determine whether personnel were aware of any documented evidence that could establish the issue as factual.

Discussion

Quality assurance personnel interviewed indicated that, in general, relationships with management were strained because of past administrative and organizational changes made by management. This resulted in a mistrust towards management which is still evident today because of ongoing changes.

The employees interviewed indicate that, except for the instrumentation discipline, management always encouraged the inspectors to document deficiencies or nonconformances; and the QA program was basically understood by management.

For the instrument discipline, inspection personnel felt that management was influencing the inspection effort by requesting inspection personnel to bypass test 1 (anchor bolt inspection) and test 2 (inspection of bolted connections) to conduct a test 52 (inspection of seismically qualified instrumentation supports or inspection and documentation of instrument lines). The inspectors voiced their opinion to their supervision pertaining to their hesitance in waiving the holdpoint for test 1 and test 2. However, the interviewees did not furnish QACEG with documented evidence.

The QACEG evaluation of the portion of the issue dealing with "quality management resolving nonconforming conditions by testing/evaluating as opposed to enforcing procedures," disclosed an opinion that previous quality management was instrumental in revising quality control procedures including acceptance/test requirements and criteria in order to support the construction effort in support of fuel load. Inspectors stated they were "ordered" by quality management to perform tests on work not yet complete and allegedly to allow construction to obtain credit for production that was only partially complete. The interviewed inspectors stated they refused and management revised the procedures deleting the inspection sequence in question. For those premature inspections that were performed, acceptance/corrective actions were ultimately documented by EN DC on FCRs and/or NCRs.

Conclusion

The issue is factual and presents a problem but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken (Class C).

Cause

It is QACEG's opinion that the quality organization was too willing to support the Construction Department in order to meet schedules.

Interviews with cognizant inspection personnel disclosed that morale, respect and trust for management (quality, construction, engineering) and communication was and remains a problem at WBN. It was also disclosed that quality management revised some quality control procedures in order to support the construction effort at the expense of sound inspection practice and requested instrumentation inspection personnel to bypass inspections. However, it was evident during the evaluation that inspectors were able to document nonconforming/failed inspections on NCRs and IRNs.

Corrective Action

Corrective action has been taken by the TVA with the reorganization of TVA management described in the NPP, implemented by the NQAM and endorsed by the NRC in their acceptance of the Topical Report TR75 1A Revision 9.

TVA's major management reorganization consolidates the various Quality Assurance functions relating to engineering, construction and operation under the Director of Nuclear Quality Assurance by standardizing TVA's Quality Assurance Program and consolidating the responsibility for the TVA QA/QC functions in one department reporting to a high level of management. This reorganization helps to elevate the importance of Quality Assurance, focuses management attention and direction of Nuclear QA activities, assures that Nuclear QA personnel are independent of production personnel, and clearly defines the lines of responsibility and authority to assure that activities will be performed consistently.

3.7.5 Issue - Management reversal of inspection findings. (IN-85 454 006, IN-86 315 006, IN-85-458-006, XX-85-069-003, WI-85-046-016. XX-85-069-008, XX 85 069 009, BNPQCP 10.35 20, RII-85-A-0199)

Specific Evaluation

This issue is site specific to WBN and was evaluated at SQN, BFN, and BLN. The QACEG review of these concerns involved the following: A review of various QCPs, the NQAM, WBN-QCI 1.02 1, "Inspection Rejection Notice", WBN Technical Instruction TI-50A and SQN TI 5.1, QAP 15.' "Reporting and Correcting Nonconformances", and ASME Section XI. In addition, discussions were held with QC supervisors and inspectors from all sites, a BLN QE supervisor, and planning/management personnel.

Discussion

This issue relating to management reversing the results of inspection rejections was addressed in QTC report IN 85-119-006 and NSRS investigation report I-85-373-NPS. The two reports concluded that the concerns were not factual. QACEG evaluation of these reports concur with the results by QTC and NSRS.

QACEG reviewed the various industrial standards, SNT-TC-1A, ASME Section XI, and site procedure Technical Instruction (TI)-50A. The provisions of these procedures allow the Level III Examiner to have the final decision on the results of an NDT examination.

The CI alleged that a valve installed in the auxiliary building 692' elevation on WBN unit #1 had a lot of rust on the body.

A walkdown of the area was performed by QACEG revealing four 4" Globe Valves in the Lay-up Water Treatment System which were painted and rust free. A records check indicated these valves were non-QA category. The cognizant Mechanical QC Supervisor recalls overruling an inspector's rejection of a cleanliness requirement on the valve. This particular valve required Class D cleanliness which allows tightly adhering rust.

It is acceptable throughout the nuclear industry for a QA/QC supervisor to reverse the results of an inspection based on technical or procedural requirements.

Discussions with several quality control supervisors and inspectors at SQN, BFN, and BLN revealed that the possibility could, and probably has existed in the past, where an inspector who initiated a nonconformance may have been unavailable because of illness or other reasons, when reinspection of the reported condition was required. At that time, through standard management practices, the supervisor would assign another individual to re-examine/inspect the reported nonconforming condition. It then may have been determined not to be a nonconforming condition and the items accepted. When inspection results are reversed by an inspector, other than the originator, there is a written justification on the Inspection Rejection Notice (IRN). The IRN is then either closed or invalidated.

Note: Discussions with various supervisors indicates that all concur that it has always been standard practice, when conditions permit, to send the initiator of the nonconforming condition back to re-examine the rejected condition if re inspection is required.

During the review of IRNs at WBN by QACEG the following problem was identified.

Inspection Rejection Notices (IRN) voided by management indicated that QCI 1.02-01, Revision 8, paragraph 6.3, provided the requirement for invalidating IRNs. Before the issue of Revision 8 there was no provisions for voiding or invalidating IRNs. However, IRNs for Civil QC, Hanger QC, and Instrumentation QC were voided before the issuing of Revision 8, when no provisions for voiding was available.

QACEG evaluation included that of the alleged improper invalidation of NCRs and found that the NCRs were being invalidated/reconstructed in accordance with the governing procedures. No improper invalidations or reconstuctions were located.

Conclusion

The portion of the issue relating to IRNs being voided at WBN before the issuing of revision 8 to QCI 1.02 1 is factual and presents a problem for which corrective action is being taken as a result of this employee concern evaluation (Class D).

Corrective Action

CATD 80113-WBN-02 was issued to WBN-QA noting an example where an IRN was voided on an inspection of a support. As a result, the support is still rejected. WBN-QA replied that the IRN was justifiably voided but that the support had been inspected and reinspected satisfactory and documentation generated. QACEG concurred.

3.7.6 Issue - Inadequate qualifications of ASME documentation reviewers. The lack of field experience of the reviewers and the lack of a degreed engineer within the ASME N 5 review group makes the review group's ability to do a thorough job suspect. (IN 85 570 C02)

Specific Evaluation

This issue is site-specific and was evaluated at WBN. It was evaluated by interviewing the former N 5 unit supervisor, an ANI, a cognizant engineer from the Department of Nuclear Engineering and reviewing the training matrix.

Discussion

An interview with the former N-5 Unit Supervisor revealed that individuals responsible for gathering data, reviewing and compiling N-5 data packages were adequately qualified to perform their duties.

Neither the ASME Section III, Division 1 Code, nor the TVA Nuclear Construction Manual (NCM), Revision 45, contains qualification requirements for personnel performing N-5 data package review. As is required throughout the TVA system, vacancies are filled via the "Vacancy Position Announcement" (VPA) followed by an application process for interested individuals. A supervisor will interview the respondents to determine their knowledge of the job requirements, based on the job description, as noted on the VPA. The best qualified individual is then chosen for the position. A VPA dated 5-16-82 was reviewed for content of the N-5 unit job description, which includes knowledge, skill and complexity of work. Basically, the VPA requirement was for the person to have a good working knowledge of the TVA ASME Code work process control system at WBN; know and understand the ASME Code requirements; and perform an N 5 unit technical review and evaluation of the documentation on systems assigned.

The N 5 unit supervisor stated that all new personnel in the unit require a minimum amount of training and a certain amount of supplemental training at his discretion. Degreed engineering personnel are not required. Field experience is a plus but not a requirement if the individual possesses other key experience such as, previous experience in reviewing other code documents, documentation review, or worked in an engineering department. The training matrix for seven N 5 unit personnel was reviewed and records indicated training in the applicable QCIs.

The previous experience of three N 5 unit personnel consisted of an SE-4 (10 years with TVA) was previously in the Welding Engineer and Document Control units; an SE-5 (15 year with TVA) as a group leader with experience at four TVA nuclear sites in Mechanical Engineering, Welding Engineering, Quality Control and Documentation Verification; and an SE-6 (12 years with TVA) as a group leader and previously was a field NDE inspector. Of the seven personnel listed on the training matrix; three were involved from the beginning of the N-5 unit in October 1981, three came to the unit between May and July 1982, and one in March 1984.

In accordance with QCI 1.45, revision 5, the N-5 unit has specific duties in the preparation of the N 5 data package. After the N-5 unit prepares the N-5 data package, the accuracy and completeness of included data is checked by both the Authorized Nuclear Inspector (ANI) at WBN and Engineering Design personnel, TVA Knoxville, before their sign off. The ANIs who performed a review and sign-off of approximately 25 N 5 data packages for unit 1 were questioned about the types of errors, if any, found after the N-5 unit review

Both indicated that no major errors were ever found. However, they stated that many typographical errors were found on the first N-5's with gradual improvement as reviews progressed.

The first N-5 data package for WBN unit 1 was sent to Engineering Design, Knoxville, for their certification sign-off on January 25, 1982. Also, a Metallurgical Engineer, Division of Nuclear Engineering (DNE), Knoxville, who was knowledgeable of the condition of the N-5 data packages was interviewed. He stated that of approximately 100 N-5 data packages reviewed by Engineering Design, only one was found in error. Two valves were identified with wrong numbers.

Conclusion

The issue can not be verified as factual (Class A). Personnel in the N 5 unit were found to have prior field experience with the TVA nuclear system which, with appropriate training, was judged adequate by supervisory personnel for the job requirements. Adequate training records have been maintained. There are no requirements for degreed engineers in the N-5 unit. Additionally, the ANIs have indicated only minor errors found in their review with gradual improvement noted with each review. The Engineering Design Group responsible for final review and certification found only one N-5 data package with errors out of approximately 100 reviewed for Unit 1.

3.7.7 Issue - Slow restructuring of the QA organization. The QA staff, which numbered about 250 persons, did not complete their internal procedures in two and a half years. (WI 85 042-001)

Specific Evaluation

This issue was site-specific to WBN. It was evaluated by interviewing personnel who were involved and by reviewing NSRS report R-83-19-QQA.

Discussion

This issue is site specific to WBN. In 1983, the NSRS issued report R-83 19-OQA, entitled "Major Management Review of the Office of Quality Assurance". This report indicates that it performed a special review of the TVA Quality Assurance Program (GNS 810930 051). The report analyzed organizational alternatives and recommended adoption of a distinct corporate-level QA office having no responsibility for line performing duties and with complete audit independence.

The Board of Directors and General Manager created the OQA with a basic mission of establishing and ensuring effective execution of an overall, integrated QA Program for TVA. The OQA was officially functional in September, 1982.

After resolution of critical staffing issues, the Office of Power (Power) Quality Assurance Branch transferred to OQA in September, 1982, and the Division of Engineering Design (EN DES) and the Division of Construction (CONST) QA Branch personnel transferred in November, 1982. Not all branch personnel were transferred to OQA, as many of the previously performed Quality functions were retained by Power and the Office of Engineering Design and Construction (OEDC). OQA primarily assumed the audit functions of the QA branches, thereby inheriting those personnel. The OQA staff numbered approximately 150 persons and, ultimately, intended to expand to 200.

It was recognized by the top level TVA management that creation of the OQA and the corresponding restructuring of the QA program would necessitate a period of integrated organizational and program development, during which time improvement in TVA quality programs would be minimal. The duration of the development period could not be precisely determined at the time of the decision to create OQA, but estimates ranged from six months to three years.

One initial task of the OQA was to incorporate various department upper tier quality assurance programs/procedures into a new set of manuals to be designated as "Management Policies and Requirements" (MPR). An interview was conducted with the WBN Management Quality Improvement Section Supervisor who was one of the individuals in OQA charged with the development of the MPR. He stated that the task of developing the various procedures for the MPR took about two years before the effort was cancelled in 1985 when the

Nuclear QA responsibility was transferred to the newly formed Division of Quality Assurance (DQA). The majority of the procedures being developed were not issued, however, the "Office of QA Procedures Manual," dated June 6, 1983 was completed and issued as a governing document.

Conclusion

The issue is factual and identifies a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken (Class C).

Corrective Action

Corrective action for this issue was the TVA reorganization of 1986. This reorganization restructured the quality organization to a strong central management concept opposite to the direction of decentralization which was in effect from 1984 to 1986. The procedure writing effort was no longer required as new procedures were required to be developed by the NPP. This new organization and new procedural system is described in the NPP, implemented in the NQAM, and endorsed by the NRC by their acceptance of the Topical Report (TR 75 1A) Revision 9.

3.7.8 Issue - Little cross-training of inspection personnel because long term assignments of inspectors results in lack of expertise in other areas. (WI--85-046-006)

Specific Evaluation

This issue is site-specific and was evaluated at WBN by interviewing three QC section supervisors.

Discussion

Long-term assignments of inspection personnel to just one area of expertise in QC is needed in order to perform inspection activities with maximum effectiveness. This is the overall attitude of three QC Section Supervisors. Job openings within the QC Department are normally filled via the VPA with the most qualified individual chosen. However, the "Articles of Agreement" allow for any employee in the same competitive level and area as the vacant position to be directed to transfer to the vacant position, as long as the transfer does not involve a change of official station. These supervisors stated there have been many opportunities

for various discipline inspectors, such as welding inspectors, to be loaned or permanently transferred to another discipline, such as electrical inspection, where cross training could occur, thereby increasing the proficiency of the individual. The supervisors interviewed do not know of any situation where the proficiency of an inspector is affected because of an excessive length of time inspecting in one discipline.

Conclusion

The issue can not be verified as factual (Class A).

3.7.9 Issue A supervisor protected and covered up for an employee who committed QA violations. (IN-85-627-10)

Specific Evaluation

This issue is site-specific to WBN. A review of the employee concern, NSRS, and QTC Files was made.

Discussion

The review of the employee concern, NSRS, and QTC Files failed to produce any additional information. The information available to QACEG lacked the specific details necessary to perform a meaningful investigation.

Conclusion

This issue could not be verified as factual (Class A).

## 4.0 COLLECTIVE SIGNIFICANCE

Within this subcategory, a recurring cause of the factual issues was the inability of management to completely implement the requirements of a total nuclear quality assurance program. This was evidenced by inadequate procedures, failure to follow procedures, and inadequate and untimely responses to the quality organizations problems and regulatory agencies requirements.

The management structure which placed construction, engineering, and quality assurance under the direction of the site director was adequate to meet regulatory requirements but was not conducive to a strong quality assurance organization.

These problems when viewed as a whole have resulted in the quality of many areas to be indeterminate and major efforts will be required to reestablish the appropriate level of quality in these areas.

The TVA major management reorganization of 1986 is described in the NPP. This management structure consolidates the quality assurance functions of engineering, construction and operation under the direction of nuclear quality assurance. This reorganization stresses the importance of Quality Assurance, focuses management attention and direction on Nuclear QA activities, assures that Nuclear QA personnel are independent of production personnel, and clearly defines the lines of responsibility and authority to assure that activities will be performed consistently.

The Nuclear Performance Plan has implemented a stronger management system and has caused new experienced managers to be hired in key positions. The new management and management structure has made great strides, but needs to do more in the areas of attention to detailed requirements and adequate procedures. In addition, response to, and resolution of, corrective action remains slow, and is sometimes still inadequate.

## 5.0 ATTACHMENTS

Attachment A - Evaluation Summary Table 80100

Attachment B - List of CATD's Issued