

TVA EMPLOYEE CONCERNS  
SPECIAL PROGRAM

REPORT NUMBER: 80100

REPORT TYPE: Watts Bar Nuclear Plant Category

REVISION NUMBER: 5

TITLE: QA Management and Policy

PAGE 1 of 94

REASON FOR REVISION:

To incorporate final CAP to CATD 80105-BLN-02. Revision indicators are located in the right hand margin.

PREPARATION

PREPARED BY:

Nita Mc Callum for T.C. GRAY  
SIGNATURE

3-9-88  
DATE

REVIEWS

PEER:

Raymond G. Lewis  
SIGNATURE

3/9/88  
DATE

TAS:

James E. Wootley III  
SIGNATURE

3/9/88  
DATE

CONCURRENCES

\_\_\_\_\_  
\_\_\_\_\_  
SIGNATURE DATE

CEG-H J. E. KARL / RL 3/9/88  
SRP Jimie W. Gage 3/11/88  
SIGNATURE DATE

APPROVED BY:

W. K. Brown 3/18/88  
ECSP MANAGER DATE

\_\_\_\_\_  
MANAGER OF NUCLEAR POWER DATE  
CONCURRENCE (FINAL REPORT ONLY)

5472T

8804070217 880328  
PDR ADOCK 05000259  
P PDR

## EXECUTIVE SUMMARY

### Subcategory 80100 QA Management and Policy

#### I. SUMMARY OF ISSUES

Within this subcategory there were 109 concerns which were evaluated in 42 issues. The issues were grouped into seven elements for ease of evaluation. The elements are: Nonconformances; QA Procedure Revisions; Procurement; Audits; QA program authority, independence and issue; QA Effectiveness - Decentralization; and QA Management and Policy.

As a result of the evaluations 33 Corrective Action Tracking Documents (CATDs) were issued addressing noted problems. The conclusions of the issues were classified as follows:

- A. 22 issues could not be verified as factual (Class A)
- B. 3 issues were factually accurate but what they describe were not problems (Class B).
- C. 11 issues were factual and identified a problem but corrective action for the problem was initiated before the employee concerns evaluation was undertaken (Class C).
- D. 6 issues were factual and presently a problem for which corrective action has been or is being, taken as a result of an employee concerns evaluation (Class D).

#### II. MAJOR FINDINGS

The major findings in this subcategory are:

- 1. Materials were purchased at all Tennessee Valley Authority (TVA) nuclear power plants without imposing the applicable QA regulatory and design based requirements on suppliers and sub-tier suppliers. Some of these materials subsequently were used in safety-related applications.
- 2. The performance of the TVA QA audit program at all nuclear plants was identified as deficient prior to the reorganization described in the Corporate Nuclear Performance Plan (NPP). The deficient areas were staffing levels, audit scope, failure to prevent recurring problems and timeliness of corrective action response and closure time.

3. At WBN and BLN, Inspection Rejection Notices are being used to document unsatisfactory inspections. These documents are not considered quality records and are not retained as a life of plant document but rather are being used as a communication and trending tool.

### III. COLLECTIVE SIGNIFICANCE OF MAJOR FINDINGS

The number of underlying problems when taken collectively indicate that management did not act adequately to implement a total QA program and allowed identified problems to go unresolved. This was evidenced by inadequate procedures, failure to follow procedures, and inadequate and untimely responses to identified quality problems.

### IV. CAUSES OF MAJOR FINDINGS

In general, the cause of the major problems is attributable to responsible QA management neither assuring that procedures adequately covered the full scope of QA activities or assuring that QA personnel comply with procedural requirements.

The problems with the procurement program were due to inadequate procedures.

The ineffectiveness of the audit program was due to a lack of management support of the TVA quality program. This lack of support was evidenced by shortcomings in staffing, failure to take action to prevent recurrence of identified problems, and a lack of timely responses to, and closure of, identified problems.

### V. CORRECTIVE ACTIONS OF MAJOR FINDINGS

The corrective action initiated by QACEG for each of the major findings is as follows.

1. Eight CATDs were issued to address various aspects of the procurement system at each site. The imposition of requirements on suppliers/subsuppliers, tracking of corrective action on items already identified, and addressing the status of previously procured items were the major items addressed.
2. Corrective action has been implemented by TVA to resolve the audit program problems. The areas of concern were staffing, failure to audit all areas of the program, and the timeliness and adequacy of corrective actions. A tracking CATD was issued to verify effective implementation.
3. CATDs were written at WBN and BLN to address the fact that IRNs were not quality documents. WBN and BLN have revised procedures to make IRN's quality documents.
4. Significant condition report SCR GEMNEB 8602 was written to review and reanalyze all accept-as-is NCRs at WBN. CATDs were written to track completion.

---

TABLE OF CONTENTS

|   | Page Number |
|---|-------------|
| 1.0 <u>CHARACTERIZATION OF ISSUES</u>   | 7           |
| 2.0 <u>EVALUATION METHODOLOGY</u>   | 8           |
| 3.0 <u>FINDINGS</u>   | 9           |
| 3.1 <u>Element</u> - Nonconformances  | 9           |
| 3.1.1 <u>Issue</u> - Employees at Watts Bar Nuclear Plant (WBN) and Bellefonte Nuclear Plant (BLN) were asked to participate in a quality survey in January 1985.   | 9           |
| 3.1.2 <u>Issue</u> - A Quality Control engineer informed the Division of Engineering Design group engineer not to issue a Nonconforming Condition Report (NCR) regarding lost documentation filed in the Document Control Unit vault. | 10          |
| 3.1.3 <u>Issue</u> - Inspection Rejection Notice quotas were required by Quality supervisors.   | 11          |
| 3.1.4 <u>Issue</u> - Quality Management resolved nonconforming conditions by testing/evaluating as opposed to enforcing procedures.   | 12          |
| 3.1.5 <u>Issue</u> - A quality supervisor failed to report a quality problem to higher management.  | 15          |
| 3.1.6 <u>Issue</u> - Possible quality problems at WBN.  | 15          |
| 3.2 <u>Quality Assurance Procedure Revisions</u>  | 16          |
| 3.2.1 <u>Issue</u> - Procedures are revised to cover up the identification of procedural violations and management errors and to accept previously unacceptable work. Revisions are made without adequate thought or review.          | 16          |
| 3.3 <u>Procurement</u>  | 18          |

---

|   | Page Number |
|---|-------------|
| 3.3.1 <u>Issue</u> - Material is procured and used in nuclear plant safety-related applications, without assuring applicable QA regulatory and design based requirements are imposed on sellers and subtier suppliers and without assuring that the material meets applicable requirements. | 18          |
| 3.3.2 <u>Issue</u> - Inadequate review process for evaluation of 10CFR21 applicability.   | 31          |
| 3.3.3 <u>Issue</u> - A 1984 report on purchasing was alleged to be an excuse for Purchasing and Power Store incompetence.   | 33          |
| 3.3.4 <u>Issue</u> - NSRS review of the TVA nuclear safety related procurement processes excluded the results of the WBN review.  | 34          |
| 3.4 <u>Audits</u>   | 35          |
| 3.4.1 <u>Issue</u> - Management pressure is restricting the audit functions.  | 35          |
| 3.4.2 <u>Issue</u> - QA Audits lacked depth.  | 43          |
| 3.4.3 <u>Issue</u> - Audit program ineffectiveness.   | 45          |
| 3.4.4 <u>Issue</u> - Quality Assurance Management verbally instructed QA audit personnel to not write deviations against the QA Program and/or Procedures.  | 49          |
| 3.4.5 <u>Issue</u> - QA Audit Group failed to resolve a nonconforming condition.  | 50          |
| 3.4.6 <u>Issue</u> - The project reference library does not contain sufficient reference material to perform quality surveys and the project does not maintain a project Quality Assurance (PQA) audit file.  | 53          |
| 3.4.7 <u>Issue</u> - Audit deviation WB-A-85-05-004 as originally written was an invalid finding.   | 53          |

|  | Page Number |
|--|-------------|
| 3.5 <u>Quality Assurance Program (Authority, Independence, Issues)</u>   | 54          |
| 3.5.1 <u>Issue</u> - Excessive Paperwork and Procedures  | 54          |
| 3.5.2 <u>Issue</u> - Inadequate procedures for the turnover of systems from Construction to Nuclear Power  | 56          |
| 3.5.3 <u>Issue</u> - The TVA's Office of Quality Assurance (OQA) did not have sufficient authority.  | 57          |
| 3.5.4 <u>Issue</u> - No QA organizational freedom to perform their organizational functions effectively  | 58          |
| 3.5.5 <u>Issue</u> - NQAM program requirements not being incorporated into the site QC program.  | 60          |
| 3.5.6 <u>Issue</u> - Abuse of authority by Site QC Inspectors  | 63          |
| 3.5.7 <u>Issue</u> - Lack of QC inspector independence   | 64          |
| 3.5.8 <u>Issue</u> - QC inspectors performing peer reviews on previously inspected items and this is considered a check or audit of inspector performance. | 65          |
| 3.5.9 <u>Issue</u> - Compliance to codes was not emphasized until the plant was nearly complete.   | 66          |
| 3.5.10 <u>Issue</u> - NCR dispositions are questionable.   | 68          |
| 3.5.11 <u>Issue</u> - Construction engineers evaluate QC identified deficiencies away.   | 71          |
| 3.5.12 <u>Issue</u> - Inadequate implementation of IEEE 336-85.  | 73          |
| 3.5.13 <u>Issue</u> - No procedures for data entry operations regarding QA records.  | 76          |

---

|   | Page Number |
|---|-------------|
| 3.5.14 <u>Issue</u> - Inadequate implementation and verification of QA program commitments and procedures.  | 77          |
| 3.6 <u>Issue</u> - <u>Quality Assurance Effectiveness/Decentralization</u>  | 77          |
| 3.6.1 <u>Issue</u> - An inadequate organizational structure as it relates to the independence of Quality Assurance Personnel.   | 77          |
| 3.7 <u>Quality Assurance Management and Policy</u>  | 80          |
| 3.7.1 <u>Issue</u> - Cost & Schedule considerations over rule Quality Considerations.   | 80          |
| 3.7.2 <u>Issue</u> - Inadequate supervision of QC inspector as evidenced by poor work practices on the part of the inspectors.  | 81          |
| 3.7.3 <u>Issue</u> - Poor leadership by a QC supervisor resulting in low morale and discontent among inspectors.  | 83          |
| 3.7.4 <u>Issue</u> - Management/Supervision was not responsive to quality concerns, was not supportive of quality or adversely influenced inspection efforts as a result of personnel policies/changes. | 84          |
| 3.7.5 <u>Issue</u> - Management reversal of inspection findings documented on IRNs.   | 86          |
| 3.7.6 <u>Issue</u> - Inadequate qualifications of ASME documentation reviewers  | 88          |
| 3.7.7 <u>Issue</u> - Slow restructuring of the QA organization  | 90          |
| 3.7.8 <u>Issue</u> - Little cross-training of inspection personnel results in long term assignments of inspectors and in lack of expertise in other areas.  | 92          |
| 3.7.9 <u>Issue</u> - A supervisor protected and covered up for an employee who committed QA violations.   | 93          |

|                                    | Page Number |
|------------------------------------|-------------|
| 4.0 <u>COLLECTIVE SIGNIFICANCE</u> | 93          |
| 5.0 <u>ATTACHMENTS</u>             | 94          |

---

SUBCATEGORY 80100

QUALITY ASSURANCE MANAGEMENT AND POLICY

1.0 CHARACTERIZATION OF ISSUES

This subcategory report addresses 42 issues which were derived from 109 employee concerns. Fifteen of the issues were generic and 27 were site specific.

Conclusions regarding the 42 issues in this report fall into the following classifications.

Twenty-two issues were not verified as factual (Class A).

Three issues were factually accurate, but what they described were not problems (Class B).

Eleven issues were factual and identified a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken (Class C).

Six issues were factual and presented a problem for which corrective action has been, or is being, taken as a result of an employee concerns evaluation (Class D).

The issues were evaluated under the following elements.

1.1 Nonconformances

Quality survey participation; documentation NCRs; quota system for deficiencies; quality management not enforcing procedures; failure to report quality problems to higher management; and possible quality problems at WBN.

1.2 Quality Assurance Procedure Revisions

Procedure revision preparation and control.

1.3 Procurement

Purchase of material for safety related applications; review process for 10 CFR 21 applicability; procurement effectiveness; and NSRS procurement report inadequacies.

1.4 Audits

Auditors pressured to close findings prematurely; audit adequacy; audit program effectiveness; auditors instructed not to write deviations; failure to resolve nonconformances; audit preparation; and audit report revisions.

1.5 Quality Assurance Program (Authority, Independence, Issues)

Excessive paperwork and procedures; system turnover; auditor authority; organizational freedom; policy implementation; QC personnel authority; independence of QC; peer reviews; inspection report alterations; adherence to codes; NCR dispositions and FSAR compliance; Construction evaluations; QA program compliance with Codes and Standards; implementation of IEEE 336-85; and data entry operations.

1.6 Quality Assurance Effectiveness, Decentralization

QA organization independence during decentralization .

1.7 Quality Assurance Management and Policy

Cost and schedule considerations; quality considerations; inadequate supervision; poor leadership; Management/Supervision response to quality concerns; Management reversal of inspection findings; qualifications of ASME document reviewers; QA organization restructuring ; and cross training of inspection personnel.

2.0 EVALUATION METHODOLOGY

General Evaluation

In general, the evaluation process consisted of researching the Employee Concern File, the NSRS and the Quality Technology Company (QTC) Files to determine if additional information was available which could be used in the investigation of the issues. The concerns were grouped into appropriate issues. Procedures/Documents were researched to determine the regulatory or procedural commitments made by the TVA. An evaluation was conducted to determine whether or not there was compliance with those commitments. Most requirements were traced from 10CFR50 Appendix B through the TVA Topical Report TVA-TR75-1A, the Nuclear

Quality Assurance Manual (NQAM), and corporate procedures to the implementing documents. Personnel were interviewed to provide first hand accounts of conditions that existed at the time of the concern and to aid in identifying available documentation related to the issues.

The results of independent reviews were also studied and their findings weighed in an effort to develop as comprehensive an appraisal as possible.

### 3.0 FINDINGS

#### 3.1 Non-Conformances

- 3.1.1 Issue - "Employees at Watts Bar Nuclear Plant (WBN) and Bellefonte Nuclear Plant (BLN) were asked to participate in a quality survey in January 1985" (BNP-QCP-10.35-10)"

##### Specific Evaluation

This issue is generic and was evaluated at WBN and BLN.

The QACEG evaluation involved the review of the Employee Concern, QTC, and NSRS Files for additional information to assist in the evaluation of the referenced survey. The Concerned Individual (CI) did not express the reason why the concern was identified. The QACEG evaluation addressed why the survey was conducted, how it was conducted, who was involved, how many employees were involved, survey results, and survey follow-ups. Discussions were held with cognizant personnel.

##### Discussion

The referenced survey was performed at WBN and BLN. Site employees were asked to complete a questionnaire and identify quality and safety concerns related to construction activities within the TVA nuclear program. This survey was sponsored by TVA management during the early stages of the Old Employee Concerns Program (OECF) to determine what type of concerns the employees had and how many concerns there were at the respective sites. In all 4,890 site employees were involved.

Site management distributed wallet size cards with five questions relating to plant safety and an explanation of how each employee could address their concerns. A review of the survey by the QACEG found the results and feedback to the employees to be complete and thorough.

#### Conclusion

The CI's statement is factually accurate but what it describes is not a problem (Class B).

- 3.1.2 Issue - A Quality Assurance (QA) engineer informed the Division of Engineering Design (EN DES) group engineer not to issue an NCR regarding lost documentation filed in the Document Control Unit (DCU) Vault. (IN-85-091-X02)

#### Specific Evaluation

This issue was site specific and evaluated at WBN. The QACEG reviewed QTC report IN-85-091-X02 for pertinent information. Quality Control Instruction (QCI) QCI-1.02 Revision 15, and QCI 1.08 Revision 12 were also reviewed to determine whether or not a nonconforming condition existed and whether the procedure for reconstruction of records was applicable.

#### Discussion

The QACEG evaluation of QTC Report IN-85-091-X02 revealed the following: Contrary to the information provided by the CI, the EN DES Engineer and not the QA Engineer objected to issuing the NCR with the disposition "use-as-is", unless the disposition was justifiable and met the guidelines established in procedure QCI-1.02. The EN DES engineer did not object to the issuance of an NCR per se.

Since these lost or missing documents were the responsibility of the DCU vault, they are assumed to be completed records in the Records Accountability Program (RAP). When records are statused as complete in the RAP, and the records are missing, this condition is considered a nonconformance in accordance with the provisions of procedure QCI-1.08, Revision 15, Paragraph 4.5 and 4.5.2. Under these conditions, an NCR should be issued to report the lost or missing documents. The requirements of procedure QCI-1.08, Paragraph 6.2 and 6.5 should be implemented for evaluating and reconstructing lost and missing records. The methods used to reconstruct lost or missing records can include: obtaining information from inspector's log books; signed chit sheets, data cards, or signed-off drawings.

The supporting documentation is to be held for the life of the original records. The method used for an Engineering Evaluation, when official records are lost or missing, is for the responsible engineer to document the evaluation and record the NCR number on the Engineering Evaluation Form.

The lost inspection records for cable 2-4V-67-2398A were not reported on a NCR by the DCU as required by QCI-1.08 paragraph 6.5.5. The missing documentation was reconstructed and entered into the document control records as a part of rework on the cable performed under Construction Maintenance Request A 505735.

QACEG also discovered that three closed NC's (5384, 5764, and 6161) identified similar conditions at WBN of lost or misplaced records which were reconstructed in accordance with site procedures. It appears that this issue is an unintentional isolated occurrence.

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).

The QACEG evaluation of this issue is based on the results of the QTC report and the verification of the reconstructed inspection records included in MR A-505735. In addition, there was evidence of DCU awareness of the established procedures during the time of the missing records.

- 3.1.3 Issue - Inspectors were required by their supervisors to write a certain number of IRNs each week and the result of this quota was that acceptable work was being rejected for the sake of numbers.  
(IN-85-233-003)

---

Specific Evaluation

This issue was site-specific to WBN. The QACEG performed an in-depth review of Quality Assurance Program Policy (QAPP), 10 "Inspection," Revision 3, Quality Assurance Procedure (QAP) QAP-15.1, "Reporting and Correcting Nonconformances," Revision 12, and QCI 1.02, "Control of Nonconforming Items," Revision 15 and QCI 1.02 1, "Inspection Rejection Notices," Revision 10. Quality Assurance/Control and construction personnel were interviewed. QACEG also reviewed NSRS historical report IN-85-233-03.

Discussion

The QACEG interviews with quality managers, supervisors, inspectors, and construction personnel revealed that IRNs are used by quality personnel to inform craft, engineering, and management of failed inspections. IRNs therefore, document unacceptable conditions requiring correction. During these interviews, it was suggested that personalities, friendships or confrontations between inspectors, craft or supervision may have had an effect on the number of IRNs issued by inspecting personnel. Personnel interviewed stated that at no time were IRN quotas required by procedure or ever implied by management. Quality supervision and management stated that IRNs are only issued if a problem or failure is found during the inspection of Quality Control Procedure (QCP) attributes.

Conclusion

The issue cannot be verified as factual (Class A).

- 3.1.4 Issue - Quality management resolved nonconforming conditions by testing/evaluating as opposed to enforcing procedures. (IN-85-993-009)

---

Specific Evaluation

This issue is site-specific to WBN. The QACEG evaluation consisted of a review of the TVA Nuclear Performance Plan (NPP), Topical Report, Revision 8, NQAM, Revision 0, QAPPs/QAPs and QCIs/QCPs (current revisions), IRNs, NCRs and Field Change Requests (FCRs). The QACEG conducted interviews with cognizant QA and QC personnel.

Discussion

The individuals interviewed alleged that previous quality management was instrumental in the revising of QCPs, including Acceptance/Test Requirements and Criteria (normally within acceptable engineering criteria), in order to support the 1984/1985 construction effort for fuel load.

Examples cited were that final electrical junction box (JB) inspection (test number 25 - final inspection of the JB with all connections and attachments completed) was being accomplished before anchor bolt inspection (tests 1 and 2 inspections for proper installation of concrete anchor bolts and bolt/thread gaps). Tests 1 and 2 were being waived by the Electrical Engineering Unit (EEU) Construction Field Engineer. Eventually, the waived requirements were documented and evaluated by EN DES through FCRs and NCRs.

A similar problem was identified regarding instrument tubing inspection, (test number 52, fabrication and configuration of instrument lines). Personnel interviewed stated they were "ordered" by quality management to perform test number 52 with tubing and fittings fit and held in place with tape at joints required to be welded, allegedly to allow construction to obtain credit for production effort which was only partially complete.

WBNP QCP-3.11-2, Revision 4, January 15, 1985 included prerequisite 6.1.2 allegedly to support the construction fuel load effort. 6.1.2 states in part . . . "Welding of the instrument line is preferred but not a prerequisite for the performance of test 52"; . . . Interviewed inspectors stated that they had refused to perform test 52 when welding was not complete.

WBN-QCP 3.11-2, Revision 5, March 26, 1985, deleted the option to allow test 52 to be performed before welding was completed.

In accordance with WBNP-QCI-1.02, Revision 15, "Control of Nonconforming Items," it is within the responsibilities of the quality manager or his designee to evaluate a problem. When the NCR initiator or Quality Manager cannot determine the appropriate corrective action, the NCR is forwarded to the applicable Design Project Organization (DPO) for evaluation and determination of the proper corrective action. Construction is required to implement the corrective action.

In accordance with WBNP-QCI-1.02-1, Revision 11, IRNs are initiated by QC inspectors to document failed in-process inspections. It is the responsibility of the Craft or Construction Engineer to restore the condition to that specified by the fabrication documents. If the condition warrants an FCR or NCR, the program requires one to be initiated for EN DES resolution. The Quality Department is not responsible for resolving the problem..

#### 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).

The QACEG evaluation disclosed that quality management is in fact resolving nonconforming conditions in accordance with the requirements of WBNP-QCI 1.02, Section 5.0. However, the QACEG evaluation also disclosed that Quality management, in at least two cases, revised procedures to authorize poor inspection practices or allowed such practices in support of construction schedules. These practices enabled, in one case, construction to perform work without required in-process inspections. In the other case, a QCP was revised to allow inspection to be performed prematurely.

---

The installations that were made during the period that was described in this issue were later documented on NCRs and FCRs and were evaluated and dispositioned by Engineering. The procedure that allowed the poor practice was revised within 3 months of issue.

- 3.1.5 Issue - A quality supervisor failed to report a quality problem to higher management. (IN-85-993-010)

Specific Evaluation

This issue is site-specific to WBN. Interviews were conducted with 12 QA/QC managers, supervisors, and inspectors to determine if incidents had occurred where quality problems were not passed on to higher management.

Discussion

Personnel interviewed did not produce documentation or remember any specific incidents of a supervisor failing to report problems to management. The majority of supervisors and inspectors stated that they personally felt they could use the chain of command, within the organization, to obtain results if a quality supervisor failed to follow-up to their satisfaction on a quality problem. Other personnel had no relevant comments concerning this issue. The QACEG was unable to obtain documentation to substantiate the issue.

Conclusion

This issue cannot be verified as factual (Class A). While the interviews identified individual opinions of their supervisors handling of quality problems, the QACEG investigation did not identify the specific case described by the CI, and could not locate documentation to establish the issue as factual.

- 3.1.6 Issue - Possible quality problems at WBN. (EX-85-180-001, WI-85-066-001)

Specific Evaluation

This issue is site-specific to WBN. The issue was discussed with twelve QA/QC personnel.

Discussion

The personnel interviewed could not offer additional information to assist in the investigation.

Conclusion

The issue cannot be verified as factual (Class A). The specific WBN issue that a "Possible Quality-Related Problem" and "Problem with Quality of Work" could not be substantiated due to lack of specific information or details.

3.2 QA Procedure Revisions

- 3.2.1 Issue - Procedures are revised to cover-up procedural violations and management errors i.e., chipping of concrete, and to accept previously unacceptable work. Revisions are made without adequate thought or review. (IN-85-279-004, IN-85-410-005, IN-85-588-002, IN-85-662-001, IN-86-243-001, IN-86-255-005, QCP 10.35-8-31, WBP-85-017-002)

Specific Evaluation

This issue is generic and was evaluated at WBN and BLN. Fourteen quality-related procedures were reviewed to determine the reason for the revisions or changes and whether the change was reviewed and approved by the proper personnel. Special attention was paid to QCI-1.07, "Work Plan" in reference to Employee Concern IN-85-410-005. Discussions were held with cognizant QA and Engineering personnel.

Discussion

At WBN, contrary to the CIs statement, the allowance for chipping concrete without a permit did not change throughout the life of QCI-1.07. All changes to this and the other selected procedures

---

were reviewed for cause. In each case, the revisions were initiated for updating, to comply with changing codes and standards, audit findings, NCR dispositions, Nuclear Regulatory Commission (NRC) regulations, and/or for clarifications or to correct typos. Additionally, all were cycled through a procedurally controlled review process that requires them to be reviewed and approved in the same manner as the original document, that is by ". . . qualified individuals within the organization responsible for the activity."

At BLN, during the course of this evaluation, a number of quality-related procedures were reviewed to determine why the revisions or changes were made to the procedures. A review of related Revision Requests revealed that the revisions were initiated for updating, to meet changing code and standard requirements, to incorporate NCR dispositions, for the addition of hold points, or to add clarification to current procedure wording. Additionally, all revision requests are cycled through a review process, as specified by BNP-QCP-10.1 "Preparation and control of Quality Control Procedures (QCPs)." It was noted that not all requested changes had been approved by management, for various reasons. All the approved revisions incorporated into the procedures, by the Procedures and Training Unit, were also processed through the required approval cycle as delineated in BNP-QCP-10.1.

The QTC File referenced the use of a memorandum issued to QC inspectors performing inspections prior to the QC procedures being revised. Through discussions with cognizant QA and Engineering personnel, the QACEG was provided with two memoranda relating to two QCPs (BNP-QCP-6.9 and BNP-QCP-6.10). These memoranda were clarifications of procedure wording by Engineering for QC.

Revisions or changes to QC documents are controlled by written procedures which comply with Appendix B to 10CFR50 and the TVA's Topical Report. The procedures reviewed as part of this evaluation indicated no deviations from these controls.

### Conclusion

Based on the QACEG investigation, this issue cannot be verified as factual. (Class A,

Revisions or changes to quality related documents are controlled by written procedures which comply with Appendix B to 10CFR50 and the TVA Topical Report. In a sample of documents selected for review no deviations from these controls were noted except one case (see paragraph 3.1.4 above) where a procedure was revised in a manner as described by the issue. This one case appeared to be an isolated incident.

### 3.3 Procurement

- 3.3.1 Issue - Material is procured and used in safety-related applications without assuring applicable QA regulatory and design based requirements are imposed on suppliers and sub-tier suppliers and that the material meets applicable requirements. (HI-85-077-N11, IN-86-011-003, OE-QMS-1, XX-85-125-006, BLNDNEEC85-13)

#### Specific Evaluation

This issue is generic and was evaluated at WBN, BFN, BLN and SQN. The evaluation consisted of a review of various procedures and memoranda for commitments governing the procurement of safety related materials, parts, or components, and interviews with cognizant personnel in Quality Engineering, Quality Control, Mechanical and Civil Engineering Units, the Division of Nuclear Quality Assurance and the Purchasing Department, in Knoxville. Also, Significant Corrective Action Report (CAR) NCO-CAR-87-006-R, NSRS Report R-84-17 NPS, Watts Bar NCR 6834 and Significant Condition Report (SCR) 6834-S, QCI 1.022-2, Sequoyah Site Standard Practice, SQA 45, SQN CAR 86-02-006, and SQN Inspection Reports 50-327 and 328/86-81 were reviewed.

#### Discussion

Procurement problems have been identified at all TVA nuclear power plants. Specifically, there was improper use of material in safety-related applications when procured under commercial grade requirements.

---

NSRS Report R-84-17-NPS, "Review of Procurement Practices And Procedures For Operating Nuclear Power Plants", dated March 12, 1985 identified various problems (as noted below) in the TVA Procurement Program which are related to this issue:

- \* Procurement system is cumbersome, and not well known by the users
- \* Commercial grade items were purchased with little or no QA requirements invoked and upgraded to QA level I and II designation.
- \* 10CFR21 requirements incorrectly linked to Nuclear Power (NUC PR) QA requirements.
- \* Quality verification not performed (receipt inspection) for commercial grade items.
- \* Insufficient documentation for transferred material.

In the past, material was purchased as commercial grade and upgraded for safety-related applications without verifying requirements such as supplier implementation of Quality Assurance Programs, or without further confirmatory testing to verify that material specification requirements were met. Additionally, the term "commercial grade" eliminated the requirement for specifying 10CFR50 and 10CFR21 applicability and allowed receiving personnel to accept and store this material with only Power Stores (warehouse) inspection. Subsequently, through transfer and inadequate upgrades, some of this material was used in safety-related applications. In the Manager of Nuclear Power's memorandums of November 24, 1986, (RIMS A02 861119 001) and February 10, 1987, (RIMS R00 870210 910) specific directives were given for the control of replacement items. For example, the procurement of Quality Assurance Level II items will be permitted only when an acceptable process for dedicating these items to safety-related applications is determined prior to purchase.

Any item, for which an acceptable dedication process cannot be defined at the time of purchase requisition preparation, is now required to be procured as Quality Assurance (QA) Level I (safety-related). The February 10, 1987 memorandum gives direction for the evaluation and associated corrective action for previously installed QA Level II items. In the discussion which follows, the procurement and upgrade deficiencies will be presented separately for the sake of clarification.

#### Procurement

At BLN one evaluation revealed that problems exist in the procurement of safety-related materials, parts, and components.

The Division of Nuclear Construction Quality Assurance Program Manual, (all revisions,) and BLN implementing procedures do not require procurement documents to contain QA Program requirements for suppliers or subsuppliers of safety-related materials, parts, or components.

A review of three BLN Construction purchase requisitions for safety-related material indicated that the appropriate block was checked by the preparer which identified that QA does apply. However, a telecon with the Head of the External Supplier Evaluation Group, Division of Nuclear Quality Assurance, Knoxville, revealed that the identification on the Purchase requisition that QA does apply was not directing the supplier to provide material in accordance with his QA program. Furthermore, he stated that the information on the purchase requisition concerning QA requirements was not being passed on to the supplier by Purchasing in Knoxville. Therefore, some items have been procured for BLN without assurance that a Quality Assurance program was applied either at the supplier or subsupplier level.

The Head of the External Supplier Evaluation Group also supplied a memorandum dated May 16, 1987, (RIMS L16 870515 838) from the Chief, Quality Systems Branch, to the Acting Director of Nuclear Construction which identified that a Significant Corrective Action Report (CAR) NCO-CAR-87-006-R was initiated. The CAR indicates that some items have been procured without assurance that a quality assurance program was applied and acceptability is indeterminate since no method was in place to verify any documentation furnished.

---

The CAR also indicates this to be a significant condition adverse to quality and as a minimum will require a review of past procurements to ascertain the status of any hardware installed in safety-related systems. However, the CAR failed to identify QA program requirements were not required to be passed on from suppliers to the sub-suppliers. QACEG issued CATD 80104-NPS-03 to identify that the proposed corrective action for the CAR must include assurance that QA requirements are required to be passed on from suppliers to sub-suppliers in construction procurement documents.

At WBN, Nonconformance Report (NCR) WBN NCR 6834 was issued for large and small bore pipe and fittings procured as TVA Class "G" (ANSI B31.1 seismic), Class "H" (ANSI B31.1 Nonseismic, and Class "L" without specified requirements for the seller to have a QA Program in compliance with ASME III and Appendix B to 10CFR50. A review of material upgrading revealed that this material was subsequently upgraded at WBN for ASME III applications. This was based on a review of the chemical and physical test results reported on the material manufacturer's CMTRs without verifying seller compliance with NB2600/10CFR50 Appendix B QA Program requirements and without further confirmation testing. This example shows the compound problem with deficient procurement specifications and inadequate material upgrades.

The SQN procurement evaluation entailed the review and evaluation of the following reports and documents:

The Generic Concern Task Force (GCTF) Report, dated May 9, 1986 for Sequoyah, stated that concern IN-86-011-003 was not valid. Their conclusion was based on additional data furnished by the Employee Response Team (ERT) which obtained additional information from the concerned individual and clarified the concern as:

"Prior to 1982, TVA Class A bolting material was purchased from Dravo Company. Dravo subcontracted with Texas Bolt for this material. The certified mill test report received from Texas Bolt did not indicate that the material was ASME Class I."

The report also addressed two specific issues: "Does TVA require material suppliers to have sub-tier suppliers meet the QA requirements for procurement and did Dravo supply bolting material for Sequoyah?"

The conclusion of the GCTF investigation stated:

"The NQAM, Part III, Section 2.1, does require sub-tier suppliers to meet the same requirements as the contract supplier. Also Dravo Corporation and Texas Bolt Company met the requirements for supplying ASME Code material. Dravo Corporation did not have a contract to supply material for the Sequoyah Nuclear Plant."

Based on our review and evaluation, QACEG concurs with the GCTF report conclusion for this specific concern.

Corrective Action Report SQ CAR 86-02-006, dated March 10, 1986, identified the following conditions in part:

- \* "Office of Engineering (OE) is supplying QA material for ASME Section III and Class 1E application with insufficient or nonexistent documentation."
- \* "On requisitions for QA Materials, the statement, "Does 10 CFR Part 21 Notice Apply? yes ( ) no ( )" is being marked out or lined out by OE."
- \* "Office of Engineering" (OE) is purchasing "QA" material for Class 1E application as "No QA" from the vendor and upgrading this material to "QA" on a transfer requisition from the Power Stores Distribution Center."
- \* "Material descriptions do not adequately describe the item being supplied."

The above items were identified as examples only, and reflect a problem in that the Office of Engineering procedural requirements were not in agreement with the NQAM requirements.

QACEG reviewed the NQAM, Part III, Section 2.1 "Procurement of Materials, Components, Spare Parts, and Services", revisions dated April 1, 1985, December 23, 1985, and June 20, 1986, which contain the requirements pertaining to this issue. The QACEG's review of the NQAM indicated that the revisions dated December 23, 1985, and June 20, 1986, included reviews to assure that procurement requirements are specified in procurement documents.

---

Additionally, TVA Memorandum (R. B. Kelly, Director, Nuclear Quality to W. C. Drotleff, Manager of Engineering) dated July 23, 1986 (L16 860723 855) stated the following in part:

"As a result of the reorganization, a number of activities which are subject to Part II and III of the NQAM are now being performed by DNE personnel. Apparently some of these personnel are unaware of their responsibility to comply with the NQAM and continue to do business as they have in the past.

Please provide for procedure revision and/or training as may be necessary to ensure that DNE coordinated material transfers at Sequoyah Nuclear Plant comply with the NQAM."

Sequoyah Site Standard Practice, SQA-45 describes the methods and requirements for controlling the procurement of materials, components, spare parts and services. It also establishes and assigns responsibilities for the preparation, review and approval of procurement documents. The revisions (dated July 9 and November 21, 1985, and February 13 and June 23, 1986) indicated that SQA-45 was revised in-part to reflect the later requirements of the NQAM.

Discussions were held with the Environmental Qualification Project Engineer, Manager of Nuclear Engineering Employee Concerns and Manager of Operation Engineering Services who were cognizant of this issue. They stated that action was being taken to resolve the procurement problems, but the Replacement Item Program (RIP) has not been fully implemented. This program was initiated by TVA partially as a result of NSRS report R-84-17 NPS and NRC Inspection Reports 50-327 and 328/86-81 citing similar deficiencies. The scope of the Program, including a list of commitments related to this issue was addressed in a letter from TVA to NRC dated April 1, 1987 (L44 870401 807). The pre-and post-restart scope of the Plan addressing seismically sensitive equipment within the boundaries of the Phase I Design Baseline Verification Program and 10CFR50.49 equipment will be evaluated prior to restart. QACEG issued a Corrective Action Tracking Document (CATD) 80101-SQN-01 to track completion of the Replacement Item Program.

At the BFN the QACEG evaluation has determined that this 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.

Reorganization of the procurement group began subsequent to the issuance of NQAM, Part III, Section 2.1 Revision 1, March 9, 1987, which requires that the Power Stores Branch meet all upper-tier requirements and defines supplier as "...Vendor, manufacturer, seller contractor, subcontractor, fabricator, consultant, and subtier levels." Power Stores implementing procedure SDSP-16.1, Revision 4, May 5, 1987, incorporates the NQAM changes. Part III, Section 2.1, "Quality Notice -Supplier Selection and Evaluation," Revision 0, January 12, 1987, establishes the Division of Nuclear Quality Assurance responsibility for issuing, maintaining and updating an acceptable suppliers list. NQAM, Part III, Section 2.1, Appendix F, delineates the requirements for determining basic component status, commercial grade status, and 10CFR Part 21 applicability. QACEG ascertained that BFN Quality Engineering (QE) is performing procurement review in accordance with Quality Methods Instruction QMI 604.1, "Review of Procurement Documents," Revision 0, February 10, 1987.

This procedure delineates what QE looks for during review of procurement documents and changes thereto for CSSC materials and services (i.e., proper QA level assignment, required technical specifications, proper QA requirements, 10CFR21 applicability, item description complete/accurate including standards, identification of component/system in which item is used, source and/or receipt inspection, etc.) All requirements of the upper-tier procedures for procurement are reference/included in this procedure.

On February 10, 1987, Mr. S. A. White, Manager of Nuclear Power, issued a memorandum mandating that corrective action be initiated by each site to evaluate and bring into compliance all material in storage as well as installed. (ROO 870210 910)

As a result of the above memorandum, a conditional release program for all QA Level II items (commercial grade items used in safety-related application) was implemented. To date, approximately thirteen thousand items have been conditionally released at BFN. CATDs 80104-BFN-01 and -02 were issued because the "Items Evaluation Group" staffing was not complete until June 1, 1987, and no NCR's, CAQR's, or SCR's have been issued to address material dedication problems at BFN.

Upgrade

At BLN, in his memorandum of March 3, 1987 (VO1 870304 800) to the Manager of Nuclear Power, the Site Director committed to a program for controlling replacement parts which also included a plan to evaluate commercial grade items currently installed in safety-related equipment.

Interviews with the supervisor of QE and the Assistant Construction Engineer, revealed that BLN has never upgraded commercial grade material for ASME Section III code applications. However, BLN has upgraded ASME III material from one ASME III class to a higher ASME III class. (e.g., class 2 to 1, or class 3 to 2, etc.) This is an acceptable practice if done correctly. However, during one QACEG evaluation of material upgrading practices, a problem was discovered concerning a missing nondestructive examination report for a ASME Class 2 to Class 1 material upgrade. The BLN "Heat/Mark/Serial No. Master Status Report" indicates what materials have been upgraded. A random check of upgraded certification documents on file revealed that a "Certification of Material Substitution" form dated November 4, 1981, required an Ultrasonic Test (U.T.) in accordance with ASME III NB2541 to upgrade an ASME Section III, Class 2, 1" plug (SA 182 F304 material) for Class 1 Application. Corrective Action Tracking Document, CATD No. 80104 BLN-02 was issued to document that the U.T. Report could not be located for this ASME Section III, Class 2 to Class 1 material upgrade. Further investigation by QACEG as a result of the BLN initial Corrective Action Plan (CAP) revealed that BLN failed to perform a surface examination required by NB2541, in addition to the U. T. examination.

The Corrective Action Plan (CAP) to the CATD was issued on June 15, 1987 escalating the problem to a Condition Adverse to Quality Report (CAQR) No. BLP 870105. This CAQR requested the Division of Nuclear Engineering (DNE) to evaluate the documentation to determine if the subject Gamma Ray Plug could remain as installed. Because of the DNE evaluation that "the Gamma Ray Plug can remain as installed", QACEG rejected the CAP because of an ASME Code violation and because no Corrective Action was provided to prevent recurrence. Note: The BLN Acting Site Director stated that no more upgrading would be done.

BLN issued another CAP dated July 15, 1987, which states in part that the rejection of the previous CAP is unacceptable to the BLN project and the issue has been properly and totally addressed. Based on that BLN response, QACEG issued a rejection to the second CAP which cited two ASME Code requirements that were violated because of missing documentation. Further investigation of this problem resulted in two additional CATDs being issued, 80104-BLN-04 and 80104-BLN-05.

CATD 80104-BLN-04 was issued to document that the Certified Material Test Report (CMTR) used by BLN for upgrade purposes does not contain the site ASME NA Certificate number and expiration date as required by TVA General Specification G-62 (Material Documentation Requirements for ASME III Applications), Revision 0, March 10, 1980.

CATD 80104-BLN-05 was issued to document the lack of evidence of the inspector's unique identifier (number) being stamped on the upgraded 1 inch Gamma Ray Plug as required by Paragraph 6.5 of Standard Operating Procedure QCRU-SOP-012, (Quality Control and Records Unit Upgrading of Material), Revision 2, March 5, 1980. BLN-QA has responded to the CATDs by stating that the 1 inch plug will be removed from the system and replaced with a plug of the proper specification and code class.

As a result of the findings which stemmed from the review of this upgrade, QACEG decided to evaluate the BLN upgrade program further. QACEG pulled a random sample of ten "upgrades" from the BLN project heat/mark/serial number Master Status Report. This report was supposed to reflect all of the "pressure retaining" material upgrades that have taken place at BLN. A review of the upgrade documents revealed that there are several alterations on the certification of material substitution sheets which occurred after their original certification. (Note: These Documents are TVA's CMTR's used for the actual upgrading of material under the ASME III Code). These alterations vary anywhere from 6 years to 10 years after completion of the form certifying the upgrade. After reviewing the alterations, the individual who made the changes was asked why these changes

were made. The answer given was that DNQA/QE was performing a contract review of the major piping contract, and was aligning all related documentation, (ie: Receiving Reports, and TVA's CMTRs,) to coincide with the heat/mark/serial number Master Status Report. A second question was asked to determine if the individual reviewed all associated welding documentation to see if the information was correct when the alterations were made. The answer was that the individual making the alterations did not review the welding documentation, nor did he perform a field verification to see what was actually installed.

Corrective Action Tracking Document, CATD 80154-BLN-01 was issued to document this inadequate verification process in support of these record alterations. The QACEG review also revealed that the original TVA review performed in support of the material upgrade did not verify material compliance with ASME III NB/NC/ND 2000 requirements, including NA 3700 requirements for implementing a QA Program. CATD 80154-BLN-02 addresses this situation.

At WBN NCRs 6834, 6687 and Significant Condition Reports (SCR) 6834-S and 6687-S were issued to address the material upgrade issue for ASME III work. WBN NCR 6687 identified that various lengths of pipe from the same heat were supplied as both ASME III Class 1 and Class 2 by material suppliers/manufacturers. The Class 1 material represented selected portions of the Class 2 heat that were upgraded from Class 2 to Class 1 based on the supplier/manufacture performing the additional NDE required by ASME III NB2557 for Class 1 applications. However, the supplier/manufacture neglected to assign and mark a separate lot number against the heat number for unique identification and traceability of the upgraded pipe to the Class 1 reports. Subsequently, TVA utilized the manufacturers heat number for traceability, and therefore could not distinguish between the Class 1 and Class 2 material after installation. TVA attempted to upgrade the questionable material installed in Class 1 systems by performing Liquid Penetrant (LP) examination of accessible external surfaces since internal and certain external surfaces were no longer readily accessible due to support, penetration, or other plant interferences. However,

ASME III NB2551 requires LP examination on all external and accessible internal surfaces. CATD 80104-WBN-01 was issued since no corrective work has been performed toward closing these NCRs since lists of affected materials were compiled in September 1986. QCI-102-2 "Review of Significant NCR Action to Prevent Recurrence" requires SCR's to be evaluated for generic applicability to all plants. SCR 6834-S was written against WBN Unit 2 and not evaluated at all TVA plants.

Inadequate upgrade and lack of traceability of materials to the point of installation compound the issue of procurement of materials without proper assurance of a QA program being in place for the suppliers/subtier suppliers.

CATD-80104-WBN-1 addresses these items along with the procurement issue. CATD 80104-WBN-01 has an approved corrective plan, however, it is being revised to encompass corrective action for all of the WBN procurement CATDs written by the Employee Concern Task Group.

At SQN upgrade related deficiencies have been addressed by the implementation of SQN Unit 2 Restart Corrective Action Plan (CAP) for CATD 80101 SQN-01 as described in the corrective action section below.

At BFN the QACEG has determined that this issue is factual as pertains to inadequate upgrade, and presents a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken. However, since work toward closing this issue was incomplete, QACEG issued CATD 80104-BFN-01 to track implementation of NQNM, Part I, Section 2.7.2, "Dedication of Commercial Grade Items." Also, CATD 80104-BFN-02 has been issued to track implementation of Site Director Standard Practice SDSP-16.1, "Dedication Program for Commercial Grade Material, Parts or Components for EQ Related Applications" which will (1) evaluate previously installed QA Level II Items, (2) evaluate QA Level II items that are conditionally released, and (3) evaluate existing Power Stores inventory of QA Level II items and returned shop spares.

### Conclusion

At all sites, the issue that some safety-related material was procured without assurance that suppliers met applicable requirements is factual and presents a problem for which corrective action has been or is being taken as a result of an employee concerns evaluation (Class D).

Causes

The causes for the deficiencies related to this issue are attributed to lack of knowledge of the requirements, insufficient procedures and inadequate corrective action.

Corrective Action

As seen in the preceding discussions the procurement issue is interrelated with 10CFR21 applicability, ASME Code requirements, receipt inspections, transfer documentation, upgrade processes and traceability.

This report has discussed various QA/QC aspects of procurement deficiencies. The materials Concern Evaluation Group has investigated the hardware aspect of the procurement issue, ie: upgrade process, material transfer procedures, and document control implementation. Consequently, there were overlapping areas of investigation and interrelated findings. The total number of CATD's generated to address the concerns for the procurement issue is presently forty-four (44). It became apparent that there was a significant amount of corrective action required to address the individual Corrective Action Plans (CAPs) and that the scope of the problem was extensive. This led to concerns within the CEGs that the coordination required by the evaluation groups to assess the CAPs, let alone the site and corporate corrective efforts, would not be adequate. On September 1, 1987, W. R. Brown Jr., ECTG Manager, issued a corporate level CATD 40700-NPS-01-RO to S. A. White, Manager, Office of Nuclear Power, (ONP) addressing that contrary to the requirements of 10 CFR 50, Appendix B, Criterion VIII, the TVA Material Control Program did/does not ensure the receipt, storage, and installation of Critical Systems, Structures, and Components (CSSC) material that is properly certified and marked, identified, and verified traceable to its Certified Materials Test Report (CMTR), throughout the fabrication, erection, installation, and use of the item.

Response to this CATD (memorandums from J. A. Kirkebo to W. R. Brown dated September 28, 1987 RIMS B01 870928 002 and B45 871210 251 dated December 16, 1987) commits to a specification improvement program initiated by DNE to upgrade TVA nuclear specifications to required material identification and traceability consistent with the requirements of 10 CFR 50 Appendix B, Criterion VIII, and code requirements as applicable to each site. This response has been accepted by ECTG.

The following CATD's have been issued by the QAELS to ensure that proper corrective action will be taken.

CATD 80104-WBN-01 was issued to WBN DNE to address the performance of improper material upgrades. The Response to this CATD includes a commitment to review and correct upper tier requirements and implementing procedures, and perform an evaluation of pressure boundary material to assure compliance to ASME and/or Regulatory requirements, amend licensing documents as required, and report results to the NRC.

CATD 80104-WBN-02 issued to WBN DNE addresses the omission of the WBN review from an NSRS Procurement investigation report. In the response to this CATD it was stated that it was NSRS management's decision to exclude the WBN findings from the final report because they were incomplete, and that other NSRS and Procurement Task Force recommendations would be evaluated to help correct WBN procurement problems. (Note: This CATD cannot be closed until documentation made confidential by the J. C. Jones vs TVA & others litigation becomes available).

CATD 80104-WBN-03 was issued to WBN DNE because an SCR (68345) used in review of the procurement issue had not been reviewed for generic applicability to other sites as required. The CAP to this CATD has initiated a potential generic condition review (B26 870818 012).

Both BFN CATDs (80104 BFN 01 and 80104-BFN-02) were issued to the BFN item evaluation group to track implementation of the commercial grade items dedication. Response to this CATD states that the Items Evaluation Group SDSP 16.1 "Piece Parts Replacement Program" Level II Schedule is in place and will track this program to completion (scheduled completion is March 1988).

CATD 80104-NPS-03 was issued to Knoxville-Purchasing to supplement NCO CAR-87 006R and address the "pass-along" of QA requirements to subsuppliers. The CAP commits to a review of past procurement practices at WBN and BLN and indicates that and the division level procedure QAP 4.1 "Procurement Document Control" has been revised to include requirements for suppliers to implement a QA Program when procuring safety related material, parts, and components from subsuppliers. At SQN and BFN, procurement practices are being reviewed and updated through the RIP program.

CATDs 80104-BLN-02, 80104-BLN-04, and 80104-BLN-05 were issued to BLN QA to address improper upgrade of ASME Class 2 gamma ray plugs, including a missing UT report and a missing Inspector ID mark. Responses to these CATDs commit to review, evaluation, and correction of BLN upgrade procedures through CAQR BLP 870365; performance of NDE to mitigate the missing UT report through CAQR BLP 870206; and replacement of the plug with no inspector ID mark attesting to proper upgrade.

CATD 80154-BLN-01, addressing alterations made to "certification of material substitution" sheets after upgrades were complete, and CATD 80154-BLN-02, addressing a needed review of ASME III upgrades to verify manufacturer and supplier implementation of a TVA and/or ASME accepted QA program, issued to BLN QA will both be resolved through proper closure of CAQR BLP 870365.

CATD 80101-SQN 01, issued to the Office of Nuclear Power addresses a needed backfit of the procurement program to assure safety-related items complied with requirements. The response to this CATD states that the RIP Program Plan (82870328001) encompasses review of previously qualified equipment.

3.3.2 Issue - Inadequate review process for evaluation of 10CFR21 applicability. (9FNIESC 95-03)

This issue differs from the issue on procurement and the use of commercial grade material in safety-related applications, in that the issue deals with the review process for designating 10CFR21 applicability to safety related material.

Specific Evaluation

This issue is generic and was evaluated at BFN and SQN. The Nuclear Quality Assurance Manual (NQAM) Part III Section 2.1, entitled "Procurement of Materials, Components, Spare Parts, and Services" was reviewed in conjunction with Appendix F, Attachment 1 (determination of basic component status and 10 CFR 21 applicability) of the NQAM, Part III, Section 2.1 to determine if appropriate requirements were contained in the NQAM and implementing procedures. SQNP SI-114.1 "Inservice Inspection" in conjunction with the NQAM Part III, Section 7.2, "Corrective Action", was also reviewed to ascertain if unacceptable indications noted during random inspections were in fact evaluated for significance and potential reportability. Four Notice of Indication (NOI) reports and associated documentation of unacceptable conditions, identified by liquid penetrant methods, were

reviewed to assure that these indications were properly evaluated for 10CFR21 applicability in accordance with the site inservice inspection program. Additionally, six purchase requisitions were also reviewed. These requisitions showed implementation of 10CFR21 requirements. Also reviewed were Engineering Procedure NEP-4.1 "Procurement", Revision 0, and recently prepared material requisitions to determine engineering involvement as it applies to the requirements of 10CFR21.

#### Discussion

The CI was concerned with the review for 10CFR21 reportability of vendor supplied items. There are two distinct groups within the TVA organization currently purchasing material. NUC PR procures items in accordance with Part III of the NQAM, supplemented with Standard Practice SQA45 ("Quality Control of Material and Parts and Services") and the Nuclear Engineering Group procures material for modifications in accordance with NEP-4.1, "Procurement." Each group determines whether 10CFR21 requirements are applicable to supplier of items and services. The Nuclear Engineering Group, is required in accordance with Section 3.0, paragraph 3.6 of NEP-4.1, and Attachment 24, "10CFR21 Applicability" to assure that TVA procurement specifications and requisition packages for nuclear safety-related items meet the reporting requirements of 10CFR21. Selected requisitions prepared during 1979-1981, at BFN and SQN, and recently prepared requisitions for material purchased by the Design Engineering Group, were reviewed to assure that documentation attesting to 10CFR21 applicability was available. All documentation reviewed was satisfactory.

The Nuclear Power Group currently purchases items in accordance with the NQAM Part III, Section 2.1, which requires evaluations of each item or service for 10CFR21 applicability by the use of Attachment 1, Appendix F, "Determination of Basic Component status and 10 CFR Part 21 Applicability." The review of Purchase Requisitions prepared between 1979 and 1986 revealed that all had been appropriately reviewed for 10CFR21 applicability with corresponding documentation substantiating all reviews.

Further investigation was conducted to ensure that the process for evaluation of 10CFR21 applicability was conducted regarding the Inservice Inspection (ISI) Program. Surveillance Instruction SI-114.1, Section 17.0,

"Notification of Indication" requires the organization assigned responsibility for repair within NUC PR to determine if the unacceptable condition is significant and potentially reportable in accordance with the requirements of NQAM, Part III, Section 7.2. A review of four of 34 Notification of Indication forms reporting unacceptable indications identified by the liquid penetrate examination method, indicated each had been evaluated for 10CFR21 applicability as required.

#### Conclusion

The issue can not be verified as factual (Class A). Appropriate documentation prepared by each purchasing group was reviewed and found satisfactory. Additionally, the process by which determinations of 10CFR21 applicability are made was found to be satisfactory.

- 3.3.3 Issue - A 1984 report on purchasing was alleged to be an excuse for Purchasing and Power Stores incompetence. (I 85 107 BLN)

#### Specific Evaluation

This issue is specific to BLN. The evaluation of this concern consisted of reviewing the 1984 report on purchasing and interviewing individuals knowledgeable of the report and its effectiveness in eliminating procurement problems. The report was titled "Report on Procurement Problems in the Office of Nuclear Power (NUC PR)," dated August, 1984 (LOO 840810 294).

#### Discussion

The report was prepared by a Procurement Problems Task Force at the request of the Manager of Nuclear Power in his memorandum of May 17, 1984. The purpose of the Task Force was to investigate and study problems related to delays in the procurement process in an effort to enhance the overall process for procuring materials and equipment for the TVA Nuclear Power Program.

Both the Director of the Division of Purchasing, who headed the above mentioned task force, and the BLN site director, who was the Manager of Nuclear Power in 1984, stated that BLN was not a part of the study. Procurements were at a low ebb in 1984 and purchasing problems existed at other sites, mainly BFN. The information examined by the task force indicated that procurement delays were basically caused by the unwarranted length of time consumed in the various steps

of the procurement cycle. The BLN Site Director also stated that beneficial results came from the various recommendations mentioned in the report such as a computer tracking system for Power originated procurement documents, onsite expeditors, and better planning and scheduling of procurements.

An interview with the Power Stores Unit Supervisor at BLN indicated that the 1984 report identified problems at other sites that alerted site management at BLN that some action should be taken to avoid possible future procurement delays. He indicated that the automated system for tracking procurement documents, involvement of expeditors, and a recently developed training program titled "Procurement Overview Training Program" at BLN, are all a result of the 1984 report on procurement problems.

#### Conclusion

The issue can not be verified as factual (Class A). The 1984 report on procurement identified problems common to the overall procurement effort at TVA Nuclear Sites. The report, although written for other sites, provided valuable recommendations for corrective action which BLN used to avoid similar problems.

- 3.3.4 Issue - NSRS review of the TVA nuclear safety related procurement processes excluded the results of the WBN review. (WI-85-041-011)

#### Specific Evaluation

This issue is site-specific and was evaluated at WBN. It was evaluated by reviewing the report, R-84-17-NPS, "Review of Procurement Practices and Procedures for Operating Nuclear Power Plants," and interviewing the three members of the NSRS team who did the research for the report. (Q01 850312 050)

#### Discussion

The NSRS report R-84-17-NPS, as the CI states, did not include any information gathered during the WBN review. A memorandum, dated June 25, 1984, (GNS 840625 050) from the Director of the NSRS to the Director of Purchasing and the Manager of Power, introduces

three NSRS team members and explains that their mission was to conduct a review of the TVA procurement processes involving nuclear safety-related activities. Phase I of this NSRS review was to address the purchasing, receiving, and storing of nuclear safety-related items for BFN, SQN and WBN. Two of these team members ultimately signed the March 1985 report.

Discussions held with those involved did not lead QACEG to a conclusion as to why the WBN findings were not included and no documentation could be found revising the initial intentions of the Phase I review. However, the CI currently has a lawsuit against TVA on this matter and WBN information relevant to the issue will not be available until the suit is settled.

#### Conclusion

The issue is factual and presents a problem for which corrective action has been, or is being, taken as a result an employee concerns evaluation (Class D). The WBN findings were not included in the Final Report. CATD 80104-WBN-02 has been issued.

#### Causes

QACEG verified that the results were not published but could not establish a cause.

#### Corrective Action

CATD 80104-WBN-02 was written to document the omission of the results of the review of the WBN procurement process from the final NSRS report. The corrective action plan states that the information gained at the other sites along with the Procurement Task Force recommendations have been utilized to develop an integrated process for procurement at WBN. QACEG concurred with the Corrective Action Plan. This CATD will remain open until the WBN information is available.

### 3.4 Audits

- 3.4.1 Issue - Management pressure is restricting the audit functions. QA management pressures auditors to close audit deviations before the auditor is satisfied that adequate corrective action has been implemented. (XX-85-116-008, QCP-10.35-8-37, QCP 10.35 8 35, XX 85 116 009)

Specific Evaluation

This issue is site-specific to SQN and BFN and was also evaluated at WBN and BLN.

The QACEG evaluation was performed in three phases: review of audit reports and applicable TVA procedures and instructions; interviews with cognizant personnel; and review of related deviation documents. The scope of the investigation was limited to the evaluation of two areas:

- A. Were the corrective action methods in compliance with the requirements of Appendix B to 10CFR50, Criterion XVIII, "Audits," and NQAM, Part III, Section 5.1 "Audits"?
- B. Was there documented evidence that QA Management had applied pressure to close deviations prematurely.

Discussion

At WBN, SQN and BFN, the evaluation process included a review of Multi Site Audit Reports CH8500 01 and CH8400-18 (L17 841228 801 and L17 841009 800). They were reviewed specifically because they were referred to QACEG by an individual during the interview process as containing pertinent information. Based on the review of twenty-three audit reports specific to WBN, SQN, and BFN, QACEG found that a considerable amount of time was being taken to close audit deviations (18 months to 3 years).

Since it was standard practice that an auditor who found a deviation was responsible to see it through to the verification of corrective action, the Quality Audit Branch and auditors would be under pressure to review and verify the corrective action, even though the sites were delinquent in responding to the audit findings in a timely manner. From this, one could draw a conclusion that in the period of 1984-1985, the audit program was not being supported by TVA Management. A memorandum from H. G. Parris to Site Directors, in June 1984 (OQA 840613 005), made mention that the NRC, on numerous occasions, criticized TVA for a lack of timeliness in responding to audit deviations.

During the review, QACEG found four instances where deviations were escalated to a higher authority for resolution. These escalations were in accordance with the TVA procedure in effect at that time (DQAI-310, superseded by DQAI 313, superseded by DQAI 104).

QACEG conducted interviews with nine QA Audit Branch Lead Auditors. The results of these interviews indicated that implicit pressures were applied by QA management to close audit deviations prior to the full satisfaction of the auditor. Therefore, auditors could have felt implied pressure to close deviations before they were satisfied that adequate corrective actions had been implemented. However, the QACEG was not able to substantiate the concern based on the audit reports, and correspondence reviewed. The evaluator also found correspondence to "All Audit Personnel" where they were instructed in handling "pressure." The word "pressure" was used in the context of closing audit deviations in a timely manner as required by applicable procedures. In addition, the review of audit reports indicated no evidence of violations to the requirements of Appendix B to 10CFR50, Criterion XVIII, "Audits" or the NQAM, Part III, Section 5.1, "Audits."

At BLN, manpower within the 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. One of the eight interviewed identified himself as the CI responsible for one of the four concerns in this issue and in turn provided names of other auditors who were in the Office of Construction Quality Assurance Branch (OCQAB) site audit group at the time.

During QACEG's interview the CI stated he had been assigned to the BLN site audit group for 8 1/2 years as a lead auditor and principal assistant to the Office of Construction Quality Assurance Branch (OCQAB) site supervisor. The CI indicated that at times it was difficult to obtain the OCQAB supervisor's concurrence with audit findings/deviation reports without alterations which watered down the identified condition. The CI felt that this was due to both the supervisor having a different interpretation of the QA program and to pressure applied by construction management. The CI further indicated that while this resulted in lessening the severity of the reported condition, the original intent of the deviation/finding was not compromised. The interview with the CI indicated that he was never instructed not to write a deviation/finding, but did recall an instance where an audit report was submitted to the

supervisor for approval and upon receipt of the approved report he noticed that one of the deviations had been omitted. No specifics could be provided to enable QACEG to locate the audit in question. The CI felt that when new people came into the audit group and saw how difficult it was in obtaining the supervisors concurrence with a deviation they would back off, not wanting a confrontation.

The CI also felt that his confrontations with the OCQAB supervisor affected his performance appraisals and offered his Management Performance Goals and Appraisal Summaries (MAS) for fiscal years 1984 and 1985 as evidence. QACEG reviewed these documents to determine whether they supported the CI's description of his relationship with the supervisor. Based on this review, QACEG is of the opinion that a confrontational relationship did exist between the CI and the OC QAB supervisor. However, while discussions with the OC QMO supervisor did explain how appraisals are performed and ratings assigned, QACEG's evaluation did not attempt to determine whether the CI's contention about his MAS rating was justified.

QACEG asked the CI if he had ever been instructed to close an audit deviation/finding before an acceptable corrective action had been completed. His reply was that he knew of no instance where this had occurred. The same questions that were asked of the CI were asked in the interviews of the remaining 7 auditors. None of these individuals could recall having been suppressed in the performance of their audit functions, nor were they instructed to close deviations/findings identified during the course of an audit prior to verification of acceptable corrective action. However, one individual stated that he was pressured to close a deviation identified during the course of a surveillance. The BLN site surveillance and audit programs were administered by the site OC QAB under the same supervisor. The individuals that performed audits would also perform surveillances in their areas of expertise. The individual indicated that as result of a surveillance of Welding Quality Control (WQC) in March 1984 that he came under extreme pressure resulting in intimidation and harassment to close three deviation reports before he was satisfied that acceptable corrective action had been completed. QACEG advised the individual that TVA's Office of Inspector General (OIG) investigates intimidation and harassment issues. The individual provided QACEG with the

subject deviation reports (i.e., CO4-S-84-0405 D01, CO4 S-84-0406 D01; and CO4 S-84-0407 D01). QACEG's review of the subject deviation reports revealed that the OC QAB evaluator (the individual being interviewed) determined that WQC's response provided inadequate corrective action. A second response submitted by WQC was also found to be unacceptable by the QAB evaluator. The QA evaluator indicated that at this point the OC QAB Supervisor subjected him to undue pressure to accept the second response. The OC QAB evaluator issued a letter to the supervisor on October 30, 1984 requesting that the final resolution of these deviations be the responsibility of the QAB supervisor and that the supervisor acknowledge this by signature on the letter. The supervisor refused to acknowledge the request but eventually did close the deviations himself on February 5, 1985 based on WQC's second response which was previously rejected by the evaluator. QACEG performed a detailed evaluation of the conditions reported on the deviation reports and WQC's corrective action response to determine whether WQC's response was adequate or whether the deviation was prematurely closed by the supervisor.

To assist in the evaluation of these DRs, QACEG utilized the services of a Stone & Webster individual certified as Level III in ultrasonic examination. The evaluation consisted of interviews with cognizant BLN site inspectors and the review of applicable TVA procedures, instructions and ultrasonic thickness examination reports. Based on this evaluation QACEG is of the opinion that the following deviations did not have an adequate corrective action response from WQC and therefore were prematurely closed by the supervisor.

1. Lack of documentation of ultrasonic test probe validation on curved surfaces.
2. Inadequate documentation of ultrasonic step wedge calibration/validation.
3. Failure to implement revisions (a) and O of General Construction Specification G29M PS. 5M.1.2.

Additionally QACEG accompanied the BLN WQC supervisor and ultrasonic testing operator to the field to witness the reexamination of wall thickness for areas selected by the QACEG. The readings were then compared with those previously recorded by WQC on the wall thickness measurement reports located in the Document Control Unit (DCU). Among the areas examined, was BNP Sequence Control Chart (SCC) number IRJ 141, weld 158, the area the OC QAB evaluator documented in DR CO4-S-84-0407-001 as having obtained a thickness reading of "considerably less" than the reading previously recorded by WQC. The QACEG examination of this area revealed a thickness reading of .146" compared with .141" documented by WQC, resulting in a difference of .005." The thickness readings obtained by QACEG of the remaining selected areas were all within +.005 and -.001" of the thicknesses documented by WQC, which is well within the normal tolerances for ultrasonic thickness measurements.

During the course of the evaluation of the subject deviation reports, QACEG had located a nonconformance report (NCR 4781), which had been initiated on March 5, 1986, for the same problem previously identified on DR CO4-S 0406-001, which was closed on February 5, 1985. The DR and NCR identified the use of a 1/2 inch transducer in applications where process specification G29M.P.S.5.M.1.2 required the use of a 1/4 inch transducer. The scope of the NCR included a review of thickness reports generated after the implementation of Revision 1 of the process specification (December 13, 1983). However, Revision (a) which directed, in certain applications, the use of the 1/4 inch transducer had been in effect since January 21, 1982. The scope of NCR 4781 does not include the period between Revision (a) (January 21, 1982), Revision 0 (April 15, 1983), and Revision 1 (December 13, 1983).

As a result of QACEG's evaluation at BLN, QACEG contacted WBN personnel assigned to the site WQC unit, to determine if WBN had deficiencies similar to those identified for BLN. The WBN WQC unit supervisor stated that step wedges used for ultrasonic thickness measurements at WBN are controlled by WBNP-QCI 1.12-15 "Step Wedges" Revision "0" 10-21-82. When questioned about the one time probe accuracy check on a curved surface the unit supervisor stated that they did not document this step, but agreed with the QACEG that to be in compliance with the one time probe accuracy check requirement delineated in G 29 MP.5.5M.1.1, documented evidence must be

available. He stated that WBN site implementing procedure QCP 4.13 "Thickness Measurement." Attachments D&E, thickness measurement forms could be revised to include provisions for the documentation of this probe accuracy check. The "thickness measurement" forms accuracy check of each test probe will be kept on file. CATD 80155 WBN-01 was issued to the QA Department, Nuclear site to track and provide assurance that corrective action has been implemented.

A review was performed of WBN monthly surveillance reports for fiscal years 1983, 1984 and 1985, to identify the DRs issued as a result of surveillance activities performed at WBN. A total of twelve DRs were found. Of the 12 DRs reviewed, 10 had been closed and 2 were open pending completion of acceptable corrective action. QACEG determined that the closed DRs contained adequate corrective action to justify their closure. However, QACEG found that the two remaining DRs have been open for an excessive period of time, i.e., DR C03-S-84-0327 D01, issued September 20, 1984, no further activity was noted after January 31, 1985, DR C03-S-85-261 D01, issued August 2, 1985, with no further activity noted after September 16, 1985.

As a result of the surveillance report review, QACEG issued CATD 80155-WBN-02 to the site QA (Quality Surveillance) to track closure of DR C03 5 84 0327 D01 and DR C03 5-85 261-D01.

In addition to the above review, QACEG also reviewed 24 (NUC PWR) surveillances, selected at random from the 1985 activity survey log. The master log shows that a total of 150 surveillances were performed in 1985 and from that population, a total of 24 surveillances were selected. The 24 surveillances generated a total of 32 DRs, 17 CARs, and 1 NCR.

In all cases the document initiator's supervisor made the final approval of the Corrective Action provided by the responsible organization. The review of surveillances in the construction department was found to be satisfactory and acceptable by QACEG.

#### Conclusion

This issue is factual and identifies a problem for which corrective action has been taken as a result of an employee concerns evaluation. (Class D)

This issue could not be verified as factual at WBN, SQN and BFN since there was no objective evidence that pressure had been used or implied, to close deviations which were considered unsatisfactory by the Auditor.

At BLN, since the CI stated that the intent of his concern was to include surveillances as well as audits, QACEG expanded the scope to include the BLN surveillance program. Based on the QACEG evaluation, this issue of OC QAB management pressure to close audit and surveillance deviations before the auditor is satisfied that adequate corrective action is implemented, was verified as factual in one case.

Cause

The cause is failure to follow specification requirements and failure to transcribe the specification requirements into lower-tier procedures.

Corrective Action

CATD 80105-BLN-01 was issued to BLN-QA because of a lack of documentation of ultrasonic test probe validation on a curved surface per General Construction Specification G29M, 5M.1.1. BLN-QA has responded by issuing CAQR BLP 870370 which states, DNE/NEB to evaluate G29M,5.M.1.1 to determine if the "test" for accuracy is required to be documented. QACEG has concurred with the CAP.

CATD 80105-BLN-02 was issued to BLN-QA because of inadequate documentation of ultrasonic step wedge calibration/validation per 10CFR50, Appendix B, Criterion XII and XVII and ASME Section III subsection NA 4933. In response, CAQR BLP 880081 was issued to DNE to document evaluation of the prior-to-each-use calibration of the D-meter, including stepwedge verification and evaluation of past inspections. QACEG has concurred with the CAP.

CATD 80105-BLN-03 was issued to BLN-QA for failure to implement requirements of General Construction Specification G29M, P5.5.M.1.2 which defines the requirements for thickness gauge on pipe, tubing and plate. BLN-QA has responded by issuing CAQR BLP 870370 which states that DNE/NEB is to evaluate and determine if the requirements of P.5.5.M.1.2 were compromised as a result of BLN utilizing P.5.5.M.1.1 to perform ultrasonic thickness measurements with a DM-2 portable digital ultrasonic thickness gauge until February 22, 1984. QACEG has concurred with the CAP.

CATD 80105-BLN-04 was issued to BLN-QA to implement a review for proper closure of surveillance deviation reports that were closed by individuals other than the initiator. NCR 4781 was cited as an example. BLN-QA responded by stating that the individual who closed the subject deviations was in the same organizations and unit as the individual who initiated the deviation. The verification of the corrective action in the deviation was substantiated by the disposition of the NCR. QACEG has concurred with the CAP.

CATD 80105-BLN-05 was issued to BLN-QA stating that NCR 4781, written to identify the use of a 1/2" transducer in instances where the process specification required to use of a 1/4" transducer after December 13, 1983, should be expanded to include the period of time prior to December 1983. BLN-QA has replied that DNE/NEB will evaluate and determine if the thickness measurements performed prior to December 13, 1983 need to be addressed by the disposition of NCR 4781. CAQR BLP 870370 was written to track the evaluation. QACEG has concurred with the CAP.

CATD 80155-WBN-01 was issued to WBN-QA to track revising site procedure QCP 4.13, "Thickness Measurements," to include documentation requirements for one time accuracy checks. WBN-QA has replied that QCP-4.13 will be revised to state that all transducers used for thickness testing will receive a one-time accuracy check. QACEG has concurred.

CATD 80155-WBN-02 was issued to WBN-QA as a result of finding two surveillance deviation reports open for an excessive amount of time. This is a violation of Appendix B to 10 CFR 50, Criterion XVI. WBN-QA responded by stating that one of the reports was closed and the other was in the process of being closed with documented evidence of on-going activity. QACEG concurred with the CAP.

- 3.4.2 Issue - QA audits lacked depth because of SQN Management complaints to the Director of QA. Subsequently, the Director of QA issued a letter to the auditors directing them to increase the number of audit areas per audit. The CI assumed this directive would restrict the auditors indepth approach. (XX-85-116-011)

#### Specific Evaluation

This issue is generic and was evaluated at WBN, SQN, BFN and BLN. The evaluation consisted of review of the QA Auditing Branch Correspondence Files, QA Audit Report Files and the QA Audit Schedule for 1983 through 1985 for additional

information relating to this issue. Also, discussions were held with the former Director of QA, the Branch Chief of the QA Audit Group and Section Supervisors to develop background information and other specific details relating to this issue.

Discussion

In this concern, the CI states that the Director of QA issued a letter (November 25, 1985) to auditors to increase the number of audit areas per audit, which the CI felt would restrict the depth of audits. Having reviewed the Correspondence Logs, RIMS and individuals' personnel files, QACEC could not locate this letter. After a discussion with the former Director of QA, we directed our attention to 1984 rather than 1985 since the subject of audit frequency, numbers of auditors on site, and organizations performing audits was a concern to Site Directors and managers in 1984.

We did locate an "Administratively Confidential" memo from the Director of QA to Branch Managers dated October 24, 1984, which did address (among other topics) audits and comments made to the Director of QA by various site and plant representatives on his visits to WBN, SQN and BFN during the week of October 14, 1984. This memo stated under "Watts Bar" that "twenty-four audits a year is considered by the plant and site staffs to be more than necessary. They would like to see this reduced by a factor of about 2." Under the comments for "Sequoyah", Site and Plant Managers made the comment that "Auditors need to be sure when they do or do not have a finding and, when possible, the number of audit team members should be reduced."

On August 7, 1984 the Nuclear Central Office Industrial Engineering Section issued a report (84 0809 20054), "Audit and Inspection Analysis," regarding the frequency and duration of those audits and inspections conducted during fiscal year 1983 at SQN and BFN. The October 22, 1984 memorandum (L17 841016 803) from the Director of QA to "Those Listed" replied to the analysis and described the directions he had given to the Division of Quality Assurance Audit Group Heads which was to:

- a. Be very sensitive to and dedicated to eliminating any unnecessary adverse impact on audited organizations.
- b. Work closely with the staff and management at each location in aggressively pursuing, planning and scheduling practices that will provide for an effective audit program and minimize unnecessary adverse impact on the audited organizations.

The Director of QA went on to state that the audit group was required by the Technical Specification (Tech Spec) requirements to perform a given number of audit "modules" and that he agreed that a smaller number of audits would lessen the impact at the plants but could still be accomplished effectively and cover the required number of audit modules. He further stated... "We will strive to work more efficiently and conduct fewer but more comprehensive audits this year while still very effectively addressing the scopes defined by our audit modules."

QACEG performed a review of audit status logs for the fiscal years 1983, 1984 and 1985, along with a review of audit reports for audits performed during those years. This indicated that depth of attribute coverage and number of audit personnel involved in each audit during fiscal years 1983, 1984 and 1985 were adequate. However, as shown below, the total number of audits performed, and the total manhours expended in 1984 at WBN and BLN were greatly reduced when compared to fiscal year 1983 and 1985.

| FISCAL<br>Year | AUDITS PERFORMED |     |     | AUDIT PERSONNEL |     |     | AUDIT MANHOURS |      |      |
|----------------|------------------|-----|-----|-----------------|-----|-----|----------------|------|------|
|                | WBN              | SQL | BLN | WBN             | SQL | BLN | WBN            | SQL  | BLN  |
| 1983           | 22               | 20  | 20  | 57              | 67  | 27  | 7040           | 3904 | 5142 |
| 1984           | 5                | 22  | 5   | 24              | 63  | 18  | 3128           | 5856 | 1928 |
| 1985           | 15               | 25  | 14  | 35              | 56  | 18  | 3560           | 9264 | 4552 |

An NRC audit conducted from January 21-25, 1985 and from January 30-February 1, 1985 resulted in two Severity Level IV violations applicable to the TVA QA Audit Program effectiveness. These violations are not directly related to the CI's specific concern in this issue, since they deal with the effectiveness issue. However, the report did address the fact that audit subjects reviewed "were very thorough audits of those activities and applicable elements of the activity appear to have been evaluated adequately."

Conclusion

This issue cannot be verified as factual (Class A). It is assumed that the CI was incorrect in stating that the Director of QA issued a letter dated November 25, 1985, and that he is referring to the "administratively confidential" memo.

- 3.4.3 Issue -- Audit program ineffectiveness. (In-86-112-003, WBN-0152 and WI 85 100 048)