

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF SPECIAL PROJECTS

NRC Inspection Report: 50-445/88-01
50-446/88-01

Permits: CPPR-126
CPPR-127

Dockets: 50-445
50-446

Category: A2

Construction Permit
Expiration Dates:
Unit 1: August 1, 1988
Unit 2: Extension request
submitted.

Applicant: TU Electric
Skyway Tower
400 North Olive Street
Lock Box 81
Dallas, Texas 75201

Facility Name: Comanche Peak Steam Electric Station (CPSES),
Units 1 & 2

Inspection At: Comanche Peak Site, Glen Rose, Texas

Inspection Conducted: January 6 through February 2, 1988

Inspectors:

C. J. Hale
C. J. Hale, Reactor Inspector
(paragraphs 2.b and 3.b)

2/22/88
Date

C. J. Hale for
P. H. Harrell, Senior Resident Inspector
(paragraph 6)

2/22/88
Date

Consultants: V. Wenczel, EG&G (paragraphs 2.a, 2.c, 3.d, and 5)
J. Birmingham, Parameter (paragraphs 2.d-e, 3.a,
3.c, 3.e, 4, and 7)

Reviewed by:

H. H. Livermore
H. H. Livermore, Lead Senior Inspector2/22/88
/DateInspection Summary:Inspection Conducted: January 6 through February 2, 1988 (Report 50-445/88-01; 50-446/88-01)

Areas Inspected: Unannounced, resident safety inspection of applicant actions on previous inspection findings, follow-up on violations/deviations, technical audit program, allegation follow up, applicant management of quality assurance activities, and general plant areas (tours).

Results: Within the areas inspected, no significant weaknesses were noted but strengths were observed in the implementation of the technical audit program and the applicant's audit program, particularly in the audit staff, the comprehensive scope of audits, and the involvement of corporate management in the assessment of the quality assurance program effectiveness. During the inspection, one violation (an inspection procedure was revised without the required review/approval of the Level III inspector, paragraph 6.a) was identified.

DETAILS1. Persons Contacted

- *J. C. Aldridge, Engineering Assurance (EA), Stone & Webster Engineering Corporation (SWEC)
- *R. P. Baker, EA Regulatory Compliance Manager, TU Electric
- *J. L. Barker, Manager, EA, TU Electric
- *D. N. Bize, EA Regulatory Compliance Supervisor, TU Electric
- *M. R. Blevins, Manager, Technical Support, TU Electric
- *J. T. Conly, Lead Licensing Engineer, SWEC
- *J. C. Finneran, Pipe Support Engineering, TU Electric
- *K. M. Fitzgerald, Program Manager, Ebasco
- *P. E. Halstead, Manager, Quality Control (QC), TU Electric
- *T. L. Heatherly, EA Regulatory Compliance Engineer, TU Electric
- *C. R. Hooten, Civil Engineering Unit Manager, TU Electric
- *J. J. Kelley, Manager, Plant Operations, TU Electric
- *O. W. Lowe, Director of Engineering, TU Electric
- *F. W. Madden, Mechanical Engineering Manager, TU Electric
- *D. M. McAfee, Manager, Quality Assurance (QA), TU Electric
- *D. E. Noss, QA Issue Interface Coordinator, TU Electric
- *E. Odar, Project Engineering Manager, Ebasco
- *M. D. Palmer, Plant Evaluation, Nuclear Operations, TU Electric
- *B. L. Ramsey, Project Manager Civil/Structural, TU Electric
- *D. M. Reynerson, Director of Construction, TU Electric
- *M. J. Riggs, Plant Evaluation Manager, Operations, TU Electric
- *A. B. Scott, Vice President, Nuclear Operations, TU Electric
- *C. E. Scott, Manager, Startup, TU Electric
- *J. C. Smith, Plant Operations Staff, TU Electric
- *M. R. Steelman, Comanche Peak Response Team, TU Electric
- *P. B. Stevens, Manager, Electrical Engineering, TU Electric
- *J. F. Streeter, Director, QA, TU Electric
- *C. L. Terry, Unit 1 Project Manager, TU Electric
- T. G. Tyler, Director of Projects, TU Electric
- *R. D. Walker, Manager of Nuclear Licensing, TU Electric

The NRC inspector also interviewed other applicant employees during this inspection period.

*Denotes personnel present at the February 2, 1988, exit interview.

2. Applicant Action on Previous Inspection Findings (92701)

- a. (Closed) Open Item (445/8514-O-01; 446/8511-O-01): This item was opened by the NRC to assure inspection of the TU Electric process for receipt inspection of vendor documents/records.

The NRC inspector determined that the applicant has an established method to receive and review vendor

documents/records, and that this method was suitably implemented. The following is a summary of the applicant's program for receiving inspection of vendor documents/records, the method used by the NRC to inspect this process, and inspection results.

TU Electric has one organization that performs the receiving inspection of safety-related non-ASME and ASME procured items for construction. Procedures governing receiving inspection were: NQA-3.09-11.02, Revision 0, "Construction Receiving Inspection," for non-ASME items; and AQP-11.4, Revision 1, "Receiving Inspections," for ASME items. Both procedures describe the quality requirements for the receiving inspection of hardware items and associated vendor documentation/records for compliance with the purchase order (PO); e.g., applicable codes, standards, and specifications. Prior to performing inspection activities, the receiving inspector obtains a copy of the item's PO which specifies technical and QA requirements and vendor documentation submittal requirements. Received items are then inspected to determine that documentation specified in the PO are present and provide identification, traceability, and item configuration. Specifically, documentation shall indicate the item was fabricated, tested, and inspected in accordance with PO requirements, prior to shipment. Results of receipt inspections are reported on a receiving inspection report (RIR). Attached to the RIR are checklists, which detail acceptance criteria for both hardware and vendor documentation/records (documentation packages). The NRC inspector reviewed the checklist form used since October 1984 to the present, and found them to be essentially unchanged. For those documentation packages (DPs) which do not conform to PO requirements, nonconformance reports (NCRs) are initiated to resolve the identified condition. The RIR is annotated with the NCR number, which signifies the item cannot be used until the identified condition has been resolved. Satisfactory DPs are transmitted to the permanent plant records vault.

To verify implementation of the established procedures for the receiving inspection program and processing of vendor documents/records, the NRC inspector reviewed 12 RIRs with associated checklists; 6 ASME and 6 Non-ASME. The time frame covered by the sample was September 1986 to January 1988. Procedures used in addition to those above were:

ASME

CP-QAP-8.1, Revisions 9 and 10, "Receiving Inspection"
AQP-11.4, Revision 0, "Receiving Inspections"

Non-ASME

QI-QP-8.02-2, Revisions 3 and 4, "Receiving Inspection Instruction"

Three NCRs initiated for deficient DPs were reviewed to assess the process for correcting deficient documentation.

The NRC inspector determined from the 12 RIRs that each of the DPs were inspected and processed as required. RIRs documented inspection results which were supported by attached checklists. The checklists identified each DP inspected/reviewed, and its status (i.e., satisfactory or unsatisfactory). Vendor supplied material test reports were compared for conformance to technical and quality requirements identified on the PO and applicable codes, standards, specifications and drawings. Finally, for satisfactorily completed RIRs, the DPs were transmitted to the permanent plant records vault as required. The three NCRs reviewed by the NRC identified nonconforming conditions, such as: certified material test report was illegible, certificate of compliance did not properly certify material to PO requirement, and the code case (ASME) used to certify material was not approved by the Brown and Root Quality Manual. Based on reviewing 12 RIRs, 3 NCRs, and associated receiving inspection procedures, the applicant has established and implemented a program to review and control vendor supplied documentation/records for conformance to PO requirements.

To further verify that the required documentation was being provided by the vendors and contractors when the procurement is made directly by TU Electric, the NRC inspector reviewed Procedure TNE-DC-5-1, "Vendor Document Review." This procedure, among other things, requires TU Electric procurement engineering to assure that vendor document submittals comply with the purchase order documentation requirements. Procurement engineering personnel prepare a vendor document index (VDI) and a vendor document checklist (VDC) for each vendor. The VDC lists the documents required by a vendor based on purchase order and change order requirements. The VDI lists the documents received from the vendor. When a vendor completes their purchase order requirements, procurement engineering would reconcile any disagreements between the VDC and VDI and then complete Form TNE-DC-5-1.3, "Vendor Document Index Close Out." This completed form documents procurement engineering's verification that the vendor had satisfactorily completed the document submittal requirements.

Based on the above inspection, the NRC inspector verified, that procedures are in place and are being implemented to not only control the receipt of vendor records, but assure that all required TU Electric vendor documents have been submitted. Accordingly, this item is closed.

- b. (Closed) Unresolved Item (445/8514-U-06; 446/8511-U-06): Chicago Bridge and Iron (CBI) records were shipped off site for copying; however, no control of the records was apparent such as type of shipping container, an absence of backup copies, and no records accountability of the shipment. (This is the same issue identified as ID Recommendations 30, 31, and 32 in Enclosure 1 to Stello's memorandum, "Implementation of Recommendations of Comanche Peak Report Review Group," April 14, 1987.)

The NRC inspector attempted to reconstruct the events related to the shipment of CBI records to Houston in the 1985 time frame. Based on a telephone interview with the CBI QA superintendent that transported most of these documents, the following information was found:

- (1) CBI would accumulate site-generated documents, by contract, for transportation to their Houston office for microfilming and compilation.
- (2) Shipment of these documents was made when a specific site contract was completed.
- (3) Shipments were made by the CBI QA superintendent in a one drawer fire rated file cabinet placed in back of a pickup truck.
- (4) The documents being shipped were the property of CBI and were accounted for in accordance with CBI procedures.

The NRC inspector reviewed CBI Procedure NRP-1, Revision 7, "Nuclear Records Procedure," which controlled the shipping process described above. This procedure described how documents were compiled to satisfy the requirements of each contract and how the documents were turned over to TU Electric. The NRC inspector also reviewed the TU Electric contracts with CBI, identifying 20 separate contracts. The first contracts were initiated in the mid 1970s and each required some or all of the activities to be conducted on site. Each contract defined the required documentation and its schedule for submittal to TU Electric. At present, all CBI onsite activities have been completed and records turned over, except for one open contract for services on an as required basis.

As mentioned above, CBI Procedure NRP-1 describes how CBI documents were compiled and then transferred to TU Electric. The specific contract identifies the required documentation through imposed specifications. For example, the first CBI contract, issued in 1974 for Unit 1 and 2 containment liners, required certain documents be submitted before construction (e.g., all calculations and inspection procedures) and others after construction was completed (e.g., certified manufacturer's material test report and heat treatment records). This contract has since been completed, but before it could be completed, CBI had to satisfy all of the contract documentation requirements.

In accordance with NRP-1 as a contract was completed or certain documents were judged ready for turnover to the client, they were compiled as directed by the CBI project manager. This compiling included the classification and indexing of documents. Once this effort was complete, CBI QA was notified that the records were ready for auditing. This auditing would occur at the site or at the home office depending on which location was used to compile the records. When the QA records audit was complete, a transmittal letter was prepared, which listed a description of the documents, their classification, and the number of folders. The records were then sent to CBI's Nuclear Records Center in Houston. Transmittal to the Nuclear Records Center was by commercial carrier or hand carried as in the case of this unresolved item, but in either case the transmitting organization was responsible for the records until receipt was acknowledged by the Nuclear Records Center. The CBI Nuclear Records Center made two microfilm copies of all hard copies, retaining one film and sending the other film and the hard copies to their client. Shipment to the client was usually by commercial carrier, but on occasion these records were hand carried.

The NRC inspector reviewed the vendor record files in the permanent plant records vault (PPRV) for two of the CBI contracts (CBI Contract Nos. 44361 and 91939). These files were inspected against the documents identified in office memorandum TSG-15,979, "CB&I Required Documentation Submittals." TSG-15,979 identified the type of documents required by several of the CBI contracts. The documents identified were compared to the file index for each of these contract files and then the file index was compared to the actual documents in the file. The file index for Contract 44361 listed three folders under file Classification 9.0, "Work Packages," but only two folders were in the contract file. An immediate search of nearby files for the missing folder was unsuccessful, but within a few hours, the PPRV personnel had obtained certified

copies of the documents in the missing folder from the microfilm of all the contract documents that accompanied the records shipment from CBI. When, or if, the missing folder is found, it will be placed in the contract file and the certified copies destroyed.

To assure that the documents required by the CBI contracts were indeed provided, the applicant performed a special audit of the largest CBI contract file in June 1986. The special audit, performed by personnel from Daniel, was a comprehensive review of the contract and specification requirements for documentation on CBI Contracts 74-2427 and -2428. The NRC inspector reviewed the Daniel audit results for this CEI contract (containment metal liner, hatch, and air locks). Ten concerns were identified but only four related to documentation that was not provided by CBI. (For perspective, the documents for Contracts 74-2427 and -2427 fill more than four standard file cabinet drawers.) All concerns were resolved and the additional documentation was provided from the CBI Nuclear Records Center.

In summary, the NRC inspector found that CBI records were shipped from the site to the records center in Houston for copying. This process was accomplished in accordance with CBI procedures. Copies were not retained on site, nor were they required to be; however, accountability was maintained by use of document transmittal lists. No violation of CBI or TU Electric procedures were identified; therefore, this unresolved item is being closed.

- c. (Closed) Open Item (445/8724-O-01; 446/8718-O-01): This open item pertained to the resolution of a significant deficiency analysis report (SDAR-125). The issue was whether defects found in installed steel manufactured by Northwestern Steel and Wire (NSW) was specific to Heat No. 70763.

To address this issue, the applicant accomplished the following actions. The site procurement records (purchase orders) were reviewed to identify steel (by heat number) obtained from NSW. Associated field fabrication and installation records were reviewed to identify locations where material was installed in safety-related applications. Of the 244 locations identified, all were visually inspected for surface defects; areas of the I beams inspected were the flanges and webbs including the fillets. No additional surface defects were identified. The NRC inspector reviewed the applicant's inspection results and supporting documentation. Based on documentation reviewed, it was determined that defects previously identified in installed steel from Heat

No. 70763 were heat number specific and not generic to other heats obtained from NSW.

- d. (Closed) Unresolved Item (446/8724-U-02): During a plant tour of the Unit 2 cable spread room, the NRC inspector identified that beveled washers were not used on certain 4-inch beams having tapered flanges.

Subsequent investigation of the above unresolved item by plant personnel identified that nonconformance report (NCR) M-85-100083-S had previously been issued to identify a generic concern relative to the proper use of bevelled washers in the Unit 2 cable spread room. Additionally, the engineering department had identified the beams likely to be nonconforming. Although the NCR addressed the nonconforming condition, the NRC inspector had other concerns relative to the problem. Specifically, the NRC inspector was concerned that the NCR was open almost three years after issuance. The NRC inspector was concerned that corrective actions on other NCRs may have been untimely.

During a meeting with the TU Electric director of QA and the TU Electric engineering assurance (EA) manager, this concern was discussed. The director of QA informed the NRC that currently over 10,000 open NCRs existed and that of these, some had been open two or three years. The large number of open NCRs was deemed to have arisen, for the most part, from reinspections performed by the CPRT and from walkdowns performed as part of the corrective action programs (CAP). The EA manager stated that because of scheduling some NCRs did remain open two to three years. For example, the NCR on improper use of bevelled washers was written for the Unit 2 cable spread room and therefore was of a lower priority than Unit 1 NCRs. The NRC inspector expressed a concern that the large number of NCRs must be reduced. The EA manager stated that a reduction in the number of open NCRs was expected to begin as the CAP engineering walkdowns neared completion and the emphasis changed to completion of rework. Since TU Electric is aware of the concern relative to open NCRs and appears to be scheduling the close out of NCRs, the NRC inspector considers the response to this concern acceptable. The unresolved item is closed based on the prior identification of the problem and its documentation on an NCR.

- e. (Closed) Open Item (445/8706-O-25): A review of corrective action reports (CARs) performed by the CPRT did not assess the technical adequacy of the CAR disposition.

This open item was addressed by the applicant in response to Violation 445/8607-V-24. That violation related to CAR-049 which was closed with an inadequate disposition. (See paragraph 3.c of this report.)

The corrective actions taken for that violation included a 100% review by TU Electric of the technical adequacy of the CAR dispositions. The CARs reviewed included B&R CARs, Dallas QA CARs, construction CARs, and operation CARs. The NRC inspector has reviewed the corrective actions taken for Violation 445/8607-V-24 and determined that they satisfactorily address this item. This item is closed.

3. Follow-up on Violations/Deviations (92702)

- a. (Closed) Violation (EA 86-09, Appendix A, Item II.B): This item refers to an NRC Technical Review Team (TRT) finding that contrary to site procedures work in the onsite fabrication shop was performed in accordance with a material requisition (MR) and that the controlling paperwork (i.e., controlled drawing, hanger package, or traveler) may not have been at the location where the work was performed. The TRT determined that this action was a violation of site procedures. The TRT found that the QC inspections and material traceability were recorded on the MR. The applicant was notified of the violation via NRC letter EA 86-09 dated May 2, 1986.

The NRC inspection of the corrective action for this item was initially performed in June of 1986. At that time the NRC inspector reviewed current MRs and fabrication packages and determined that fabrication shop activities were in compliance with procedures. The NRC inspector identified a concern related to this item in that the controlling procedure for MRs (CP-CPM-7.3A) was inadequate and, therefore, this item was not closed.

During this report period, the NRC inspector reviewed four fabrication packages currently being worked. These packages were found to properly provide controlled drawings, inspection sheets, and material identity logs.

The NRC inspector discussed the requirements of Brown & Root (B&R) Procedure PS-ACP-11.5, Revision 2, "Component Support Fabrication," and TU Electric Specification 2323-SS-16B, Revision 1, "Structural Steel/Miscellaneous Steel (Category I and II.)," with two of the shop foremen, two craftsmen, and a QC inspector all in the fabrication shop. Each of the above personnel was knowledgeable of the procedures. Since (1) the preparation of MRs was found to be in compliance with procedural requirements, (2) current implementation of fabrication shop

activities utilizes the controlled drawings, hanger package, or traveler as required, and (3) fabrication shop personnel are knowledgeable of fabrication shop procedures, this item is closed.

- b. (Closed) Violation (445/8514-V-02; 446/8511-V-03): Certain design documents were shipped from the site to the New York offices of Stone and Webster Engineering Corporation (SWEC) without procedures being established and implemented for the control of these QA records. These design documents were shipped in cardboard boxes, no backup copies were retained by the site, and no accountability of documents shipped or received was maintained. (This item was also identified as ID Recommendation Nos. 26 through 29 in Enclosure 1 of the Stello Memorandum, "Implementation of Recommendation of Comanche Peak Report Review Group," dated April 14, 1987.)

From interviews and document reviews, the NRC inspector established the following. By letter, dated August 1, 1985, the first in a series of document shipments was sent from the site to the SWEC New York offices. These documents were calculation packages bound in folders, each folder containing numerous pages for all ASME large bore pipe supports Classes 2 and 3. Other large bore pipe supports calculation packages were also sent, but the majority were for ASME Class 2 and 3 pipe supports. These calculation packages were taken from the pipe support engineering document files. They were the original calculations and no backup copy of the calculations was retained at the site. Each document shipment was transmitted with a letter which listed each calculation package in the shipment and required receipt acknowledgment for the shipment. The transmittal letter did not list the number of pages in each calculation package; however, the pages in each package were bound in folders. This process continued for 14 shipments for a total of approximately 100 calculation packages amounting to several thousand pages, the last shipment being October 12, 1985. On October 16, 1985, the NRC inspector identified this process as being in violation of requirements; however, a procedure was in place during this time period and had it been followed the violation would have been avoided.

TUGCo Nuclear Engineering (TNE) Procedure TNE-AD-4, "Control of Engineering Documents", Revision 6, stated in Figure 1 that the Document Control Center (DCC) would make and retain a copy of completed calculations and design verifications that were distributed externally.

In response to the identified violation, TNE Procedure TNE-AD-4-6, "Transmittal of Pipe Support Engineering Calculations", was issued November 25, 1985. This procedure more specifically implemented the requirements of TNE-AD-4 concerning the calculation package shipments to SWEC. Section 2.3 of Procedure TNE-AD-4-6 required, "If the original calculations are transmitted, copies shall be maintained in the PSE files." TNE-AD-4-6 replaced TNE Procedure CP-EI-18.0-4, Revision 0, dated July 25, 1985, which had the same title and same instruction, but had failed to require the site to retain copies of documents shipped to SWEC. In addition, SWEC was requested to return to the site copies of all documents sent to them during the period from August 1 to October 12, 1985.

For those documents shipped to SWEC between August 1 and October 12, 1985, the NRC inspector verified the following by review of transmittal letters and TU Electric document accountability sheets:

- (1) All calculation packages sent from the site were acknowledged received by SWEC.
- (2) All calculation packages sent from the site were copied by SWEC and returned to the site, the last shipment being December 9, 1985, and site personnel had completed verification that all had been returned by February 1986, this being accomplished by comparing the copies received from SWEC to the transmittal record of the calculation packages initially sent.

On November 5, 1985, the site resumed shipment of calculation packages to SWEC in accordance with TNE-AD-4 and TNE-AD-4-6. These shipments continued until March 24, 1986, the date of the last large shipment of documents. The NRC inspector found no other occurrence of procedure violation in these shipments; i.e., copies were made and retained at the site prior to shipment.

As noted earlier, the only calculation packages involved in these shipments were for large bore pipe supports. The NRC inspector discussed the status and use of these calculation packages with TU Electric and SWEC management personnel. Of significance from these discussions was the fact that the calculations obtained from TU Electric were hardly used if at all by SWEC. According to SWEC personnel, the only documents used in the packages were reference copies of drawings. The SWEC and TU Electric personnel stated further that every pipe support calculation involved in these shipments has been superseded.

SWEC has reperformed all of these calculations and the SWEC calculations are now the calculations-of-record.

All of the original calculation packages are being returned to TU Electric. Only a small percent remain in the custody of SWEC and even these are awaiting return to TU Electric. At present TU Electric is holding these calculation packages in the engineering records center. The records engineer in charge of this center stated that there are no plans to dispose of these calculation packages even though they have been superseded.

The NRC inspector is closing action on this item based on the foregoing and the further consideration that: (1) all of the original calculation packages were accounted for and (2) none of the original calculations are now the calculation-of-record.

- c. (Closed) Violation (445/8607-V-24): This violation concerned closure of CAR 049 prior to completion of corrective action.

The applicant performed a review of all CARs issued by TU Electric and B&R closed previous to December 22, 1986. The review of CAR dispositions was performed to determine if the dispositions were appropriate to the identified concern and whether the dispositions were sufficiently implemented to justify CAR closure.

The NRC inspector reviewed 15 B&R CARs and 35 TU Electric CARs issued by construction, operations, and the former Dallas based TU Electric audit group. From the review the NRC inspector determined that the identification of root cause, corrective actions, and the actions to preclude recurrence were adequate to justify CAR closure. The NRC inspector also performed a review of the applicant actions taken to verify the above items.

For example, the CAR files contained copies of the training records or procedural revision required by the CAR. The NRC inspector noted that early CARs did not always provide such backup documentation. Those CARs that did not have backup documentation were found to have statements and/or signatures that corrective actions had been verified. This practice was in keeping with the procedural requirements for that time.

The NRC inspector reviewed additional files, letters, and memoranda prepared during the applicant's review of the CAR files. The files and memoranda showed that the applicant had performed additional actions for seven CARs and that verification of corrective actions was performed. The NRC inspector reviewed these additional

actions and determined that they were proper. Based on the NRC inspector's evaluation of the 50 CARs and the review of the applicant's additional actions the NRC inspector determined that the review of CARs was satisfactory and that this violation is closed.

- d. (Closed) Violation (445/8718-V-04; 446/8714-V-03): The package inventory card and the electrical construction documentation package did not agree.

The applicant responded to the condition identified by the NRC inspector when the contents of 10 electrical penetration assembly documentation packages (inventoried by the paper flow group (PFG) distribution satellite) did not agree with the corresponding package inventory card (PIC). Specifically, the number of megger data sheets, contained in the documentation package as an attachment to Procedure EEI-22, "Installation of Conax Feedthrough/Adaptor Module Assemblies into Amphenol Sams Penetrations," were not consistently identified on the PIC. The applicant committed to: (1) institute a standard method for designating procedure attachments on the PICs; (2) train appropriate PFG personnel to the standard methods to be used to designate procedure attachments in the PICs; and (3) review all electrical penetration assembly documentation packages and revise the PICs, as necessary, to indicate the correct number of megger data sheets contained in the packages.

The NRC inspector verified completion of the above actions by documentation reviews and personnel interviews. Written and verbal instructions were given to both old and new employees concerning the standard method for designating procedure attachments on the PIC (i.e., EEI-22, Attachment 1). To resolve possible ambiguities revised Procedure CP-CPM-7.1B, "Electrical," has been issued using Document Change Notice (DCN) 6. This revision provides further clarification on the standard method for documenting procedure attachments on the PIC.

Approximately 430 EPA documentation packages were reviewed by PFG personnel to assure consistency between the PIC and the documentation package. The NRC inspector reviewed 20 packages for consistency. These packages were determined to be correct.

Based on documentation reviews, which substantiated the completion of actions committed by the applicant, this violation is closed.

- e. (Closed) Deviation (445/8729-D-01): During a field inspection performed for Verification Package I-M-VII.a.9-082, the CPRT inspector incorrectly verified

a 1/2" NPT opening as being 3/4" NPT. The opening was specified by Drawing 102202E as a drain for the turbine casing of the turbine driven auxiliary feedwater pump for Unit 1.

The CPRT reinspected the above condition and determined the CPRT inspector was in error. The inspection checklist for the verification package was corrected and deviation report (DR) I-M-VII.a.9-082-01-DR5 was issued to document the incorrect connection size. The CPRT Inspection Supervisor reviewed the inspector's past performance and determined that the deviation was an isolated occurrence. The NRC inspector reviewed the corrected inspection checklist and DR I-M-VII.a.9-082-01-DR5 and determined that CPRT had properly documented the nonconforming condition. The NRC inspector reviewed the results of the CPRT inspection supervisor's review of the inspector's past performance and concurs that the deviation appears to be an isolated occurrence. The responsible CPRT inspector is no longer employed by CPRT; therefore, retraining is not required. This item is closed.

4. Technical Audit Program (35060)

The activities of the TU Electric technical audit program (TAP) were previously inspected and documented by the NRC inspector in NRC Inspection Report 50-445/87-24; 50-446/87-18. At that time the NRC inspector: (1) evaluated the procedure controlling the TAP, NQA 3.07-1.01, "Technical Audit Program", (2) reviewed the qualifications of TAP audit personnel, and (3) inspected, in detail, the records of four TAP audits.

During this report period, the NRC inspection activities included: (1) review of the changes incorporated in the TAP controlling Procedure NQA 3.07-1.01, Revision 1; (2) review of the qualifications of additional TAP audit personnel; (3) inspection of the records of four TAP audits performed at contractor's offsite offices (e.g., Audit ATP-87-75 which was performed at Impell's regional office in Lincolnshire, Illinois); (4) detailed inspection of Audit ATP-87-69 (which was an evaluation of conduit supports design validation performed on site); and (5) review of previous audits to determine whether the content of audit checklists changed appropriately as the CAPs changed.

Review by the NRC inspector of the changes incorporated into NQA 3.07-1.01 determined that the changes were minor in nature and were added to improve the procedure's clarity. For example, one change to Procedure NQA 3.07-1.01 provided updated references to these procedures by which the training, indoctrination, and certification of auditors and lead auditors were to be accomplished. The changes to the controlling

procedure were considered appropriate and did not lessen the scope nor the controls in place for the TAP.

The NRC inspector reviewed the qualifications of five TAP audit personnel, including two technical specialists used by the TAP on an as needed basis. The qualifications were inspected by a review of the personnel resumes maintained by the QA training group. The results of this review showed that each individual had received indoctrination and training in those ANSI standards and TU Electric procedures related to the TAP. Each of the individuals was found to be a degreed engineer with approximately 15 years of experience relating to nuclear industry.

Audit records resulting from TAP audits conducted at offsite offices of Stone & Webster, Ebasco, and Impell were inspected. Specifically, the audit checklist and audit reports were reviewed to determine whether: (1) the checklists sufficiently covered the scope of the work being audited; (2) the checklists were sufficiently detailed to assure that the technical approach, use of design criteria, use of computer programs, calculations, document preparation, and consideration of generic technical issues were acceptable; (3) deviations from requirements or errors in calculations were identified as deficiencies or observations in the audit report; and (4) follow-up of deficiencies was accomplished in an appropriate and timely manner.

The NRC inspector reviewed completed audits ATP-87-51, ATP-87-56, ATP-87-58, and ATP-87-75. A typical example of these audits is ATP-87-51. Audit ATP-87-51 (performed at the New York office of Ebasco) reviewed five design basis documents (DBDs), thirty-one calculations, two design change authorizations, four drawings, and six design issue resolutions. The checklist for ATP-87-51 consisted of 127 items. These items included: (1) specific questions on generic technical issues such as adequacy of HVAC heat loads; (2) programmatic questions on the general design process such as whether procedures, specifications, and drawings used for design evaluation are approved and current; (3) specific questions for DBDs such as were source documents properly identified, were all of the applicable Regulatory Guides identified, and were environmental conditions clearly identified; (4) questions designed to assure the adequacy of calculations such as was the calculation properly reviewed, was reference information properly transferred, and were equations appropriate for intended use; (5) generic questions on drawings such as were drawings relative to safety clearly identified as safety-related, were engineering symbols used adequately defined, and were interface drawings referenced; (6) questions on specifications such as does the specification provide sufficient design data (pressure, temperature, flow), has the interdisciplinary review been performed properly, and

were service conditions correctly identified; and (7) questions on design issue resolution such as does the resolution respond to the concern raised, and does the response provide an auditable trail to the design document.

Based on review of the completed checklists, the evidence observed by the audit team, and the audit team's evaluation of the evidence, the NRC inspector determined that the audit scopes were appropriate for the work being audited and that the audit checklists were sufficiently detailed to assess the work.

In order to assess audit performance, the NRC inspector reperformed, in part, Audit ATP-87-69. Audit ATP-87-69 had been performed by the TAP, November 2-6, 1987, at the Ebasco onsite office. The audit was of the technical adequacy of the Ebasco conduit support design validation program. The NRC inspector reviewed the audit report, audit checklist, and the correspondence relative to follow-up actions on audit deficiencies. The NRC inspector performed the assessment of Audit ATP-87-69 in light of the purpose of the audit as stated on the audit report: (1) determine that Ebasco's calculation packages are in compliance with applicable procedure requirements; (2) verify that as-built or as-installed configurations are factored into the Ebasco design validation process; (3) examine and assess calculations to determine technical accuracy and compliance with applicable engineering codes and standards; (4) verify that corrective actions to resolve generic technical issues are appropriately addressed; and (5) verify that completed documentation is being accumulated and packaged in accordance with approved program and procedure requirements.

For this audit (ATP-87-69) the TAP audit team reviewed 17 conduit isometric verification packages, one individually analyzed support calculation package, and one generic calculation. In reperforming the audit, the NRC inspector reviewed three conduit isometric verification packages and one generic calculation. Specific packages reviewed were Conduit Isometric Verification Packages 05201, 06156, and 06285 and Generic Calculation TNE-CS-CA-CA-1a.

The NRC inspector found the audit checklist to consist of specific questions designed to assess the programmatic implementation of the conduit support design validation packages as well as the technical adequacy of the packages. For example, the checklist included specific items, such as: (1) verify that completed documentation is accumulated and packaged in accordance with approved program and procedure requirements; (2) verify dynamic amplification factors (design "g" valves) are in accordance with Procedure SAG.CP10; (3) verify bolt hole tolerances and edge distances are in accordance with the requirements of SAG.CP10 and AISC code. The NRC inspector

completed the audit of the three verification packages and compared the results to the TAP audit results. Although the NRC inspector noted a negligible arithmetic error not identified by the TAP, the results of the two audits were essentially the same.

The purpose of generic calculation TNE-CS-CA-CA-1a was to evaluate the allowable capacities of certain generic supports found in Drawing 2323-S-0910 utilizing the results of actual field tests. In assessing the TAP actions performed relative to auditing TNE-CS-CA-CA-1a, the NRC inspector used the following criteria: (1) were the calculations used to determine the allowable loads accurate; (2) were the adjustments made to allowable loads appropriate; (3) were the test configurations sufficiently varied to allow the establishment of generic allowable loads for each type of support; (4) were engineering assumptions clearly stated and appropriately applied; and (5) were conclusions reasonable. Upon comparing the results of the NRC inspector's assessment and the TAP assessment, the NRC inspector determined that the TAP assessment was acceptable.

Based on review of the three conduit support verification packages and the generic calculation, the NRC inspector determined that the TAP audit implementation was acceptable.

The NRC inspector determined that Audit ATP-87-69 was primarily technical in nature rather than programmatic. The approximate percentage of checklist items of a technical nature was 75%. This percentage is considered appropriate and in keeping with the intent of the TAP. A review of earlier audits of the Ebasco onsite work scope such as Audit ATP-87-01 showed a higher percentage of programmatic checklist items. The emphasis on programmatic implementation is considered appropriate for the early stage of the Ebasco work in order to assure the timely development of procedures, their effectiveness, and the conduct of training on procedures to implement the Ebasco work scope.

No violations or deviations were identified. Further NRC inspection of the TAP to verify continued implementation is planned.

5. Allegation Follow-up (99014)

(Closed) Allegation (OSP-86-A-0151): Five concerns were submitted to TU Electric for consideration and action. Of the five concerns, four were nonsafety, and one was potentially safety-related. The following is a description of the concerns, TU Electric actions, and actions taken by the NRC.

a. Nonsafety-related concerns

These concerns were addressed by TU Electric as described below and no further NRC action is planned.

- (1) There was cracking of the main condenser tube sheets. A similar concern was addressed by the NRC in NUREG-0797, Safety Evaluation Report, Supplement 8, page K-113. The applicant has since replaced the tube bundles which includes the tube sheets, for both Unit 1 and 2 condensers.
- (2) The radius taper of the Squaw Creek Reservoir (dam) is not in accordance with design. The fill for the dam was made in some cases in 18-inch lifts versus the 6-inch lift specified by procedure. SAFETEAM assessed this concern and determined that the slope (taper) and configuration (radius) of the Squaw Creek Reservoir conforms to the established design requirements for the dam. The lifts were found to be accomplished in accordance with lift thickness requirements. Further, the dam's structure is being monitored by the Texas Department of Water Resources on a semiannual basis. Monitoring results indicate the structure is performing its designed function.
- (3) The main circulating water pump intake baffles were improperly installed and the proper weld procedures were not followed. In addition, the stop gates for the main circulating pump were not properly attached structurally. (Stop gates are used to isolate/seal the water inlet from the lake to permit access to the pump's lower unit for maintenance activities.) The applicant reviewed documentation for the installation of the Unit 1 and 2 circulating water pumps. Based on this review, no evidence was found to indicate the intake baffles and stop gates were not properly installed. Further, the Welding Procedure Specification 88032, used for installation welding, was determined to be the proper procedure. Accordingly this concern was not substantiated by TU Electric and no other actions were taken.
- (4) There was cracking of the cavity liner plates. The allegor recommended the cracking problem be looked at generically based on lot and heat number. This concern refers to a cracking problem associated with the refueling cavity stainless steel liner for Unit 2. The allegation was substantiated in that cracking existed in eight liner plates for Unit 2 in both the weld and heat effected zones. The condition was evaluated for generic implications, but none were found. The applicant determined

cracking was a function of construction activities and was not inherent to lot or heat number. The cracks were repaired. In addition, fuel pool liner welds were reinspected and the results documented in ISAP VII.c, Appendix 24. Fuel pool liner documentation was reviewed and the results documented in ISAP VII.a.8. The refueling cavity has been reclassified as nonsafety-related by the applicant, based on the function of the liner plates. Reclassification by the applicant has been reviewed and accepted by the NRC (NUREG-0797, Supplement 10, page N-287, Reference 8.[4]).

b. Safety-related Concerns

Two or three 5 gallon cans of trash were not removed prior to concrete placement in the Unit 1 containment wall at a location 50 feet from the personnel air lock and at the same elevation as the personnel air lock.

Review

The NRC inspector reviewed the assessments accomplished by the SAFETEAM, QC, and engineering to resolve the concern. The results of these reviews follows:

SAFETEAM reviewed concrete placement inspection records to determine if the suspected condition had ever been identified by QC inspectors. One of the prerequisites to concrete placement is QC's verification of cleanliness. In addition, the NCR computer printout log was reviewed to see if the suspected condition had been reported on an NCR. Neither the reviewed inspection records nor the NCR log identified any condition involving trash cans in concrete forms prior to concrete placement, as alleged. Proceeding on the assumption that the alleged condition occurred but was not detected, TU Electric had an engineering evaluation performed. This evaluation was to determine what, if any, corrective action should be taken given that two or three 5 gallon cans of trash were present in the containment wall as alleged. The engineering evaluation was initiated by an NCR (C86-103255). Once the NCR was issued to track and resolve this concern, the SAFETEAM considered its involvement closed.

The NRC inspector reviewed NCR C86-103255 and the supporting engineering documentation. The NCR was dispositioned use-as-is with no actions required. This disposition was based on an engineering calculation that addressed the effects of the trash cans on the structural integrity and radiological shielding at the identified location. Methods used in the calculation postulated the position of the buried trash cans to be that which would

result in the maximum available concrete void. No adverse effects were found to exist if three 5 gallon trash cans had been left in the concrete.

Conclusion

The allegation could not be substantiated. The applicant performed an engineering evaluation to determine if any adverse effects on containment wall integrity or shielding would have resulted if the alleged condition did exist. None were identified. With the absence of any safety significance regarding this concern, the allegation is closed.

6. Applicant Management of Quality Assurance Activities (35060)

The NRC inspector performed a review to determine the effectiveness of applicant management and implementation of the corporate QA program for ongoing activities of design, procurement, and construction. Within this area of the inspection, a number of elements of the QA program were reviewed. Each area is discussed below.

a. Corporate QA Organization and Its Function

This element of the QA program was reviewed to verify that the applicant had established an adequate organization for controlling QA activities. The following items were considered during this review.

The applicant's overall organization was structured such that the QA organization maintained organizational freedom assuring that sufficient independence from cost and schedule pressures existed.

The NRC inspector reviewed the applicant's overall organization chart, as shown in Figure 17.2-1 of the Final Safety Analysis Report (FSAR), in conjunction with the description of each organization's functional responsibilities, as stated in Chapter 13 of the FSAR. During the review, the NRC inspector noted one case where freedom from cost and scheduling considerations was not apparent. The QA and Reactor Engineering organizations report to the Vice President, Nuclear Engineering. Although no problems were noted at this time, the potential for the cost and scheduling pressures experienced by the Reactor Engineering organization may adversely impact the organizational freedom of the QA organization when the plant enters an operating mode. The Reactor Engineering organization performs unique functions during refueling outages that permit plant startup at the completion of the outage. Since the QA organization performs audits of the Reactor Engineering

organization, the NRC inspector was concerned that the audit findings identified by the QA organization may not receive proper management attention when weighed against the need for the Reactor Engineering organization to complete its refueling outage activities.

This item was discussed with applicant management personnel. Although management personnel did not believe a QA organization independence problem existed, the personnel stated that an organizational review would be performed. This item will be reviewed during a future inspection (445/8801-O-01; 446/8801-O-01).

No other problems with the applicant's organizational structure with respect to the independence of the QA organization were identified.

The management personnel qualifications for the positions of Director, QA; Manager, QA; Manager, Operations QA; and Manager, QC were stated in Chapter 13 of the FSAR. The NRC inspector reviewed the resumes for the individuals currently holding these QA management positions. According to the information provided on the resumes, each QA manager exceeded the stated FSAR qualifications. No problems were noted by the NRC inspector.

Procedures were established by the QA organization to implement the QA program requirements, as stated in Chapter 17 of the FSAR. The NRC inspector reviewed selected procedures from the applicant's Operations, Startup, and Design and Construction QA programs. The applicant had established a QA program to provide specific QA instructions for the different activities associated with design and construction, startup, and operation of the plant. Based on a general review of the applicable procedures, it appeared that the applicant had provided adequate instructions for the implementation of these different activities.

The NRC inspector reviewed the performance of QA-related activities to verify that the activities were performed in accordance with approved procedures. The verification was performed by reviewing completed QA documentation and discussions with individuals involved in QA activities. During the review, the NRC inspector noted that the applicant had failed to comply with Procedure NQA 1.03, "Development, Revision, Control and Distribution of TU Electric NEO Quality Assurance Department Procedures," Revision 3, dated October 5, 1987. The failure to comply with Procedure NQA 1.03 was related to the failure of the appropriate individual to review a change to a procedure prior to issuance of a revision.

Criterion V of Appendix B to 10 CFR Part 50 states, in part, that activities affecting quality shall be prescribed by documented procedures, of a type appropriate to the circumstances, and shall be accomplished in accordance with these procedures.

Paragraph 6.7.3 of Procedure NQA 1.03 stated that NDE and inspection procedures require the approval of the discipline Level III inspector. Paragraph 6.5.1 of Procedure NQA 1.03 stated, in part, that a DCN shall be forwarded to the appropriate Level III (if applicable), the Section Manager, and the Director, Quality Assurance for approval.

Contrary to the above, DCN 3 to Procedure NQA 3.09-5.01, "Inspection of Instrumentation Components," an inspection procedure, was issued without the approval of the discipline Level III inspector. DCN 3 revised the technical content of inspection Procedure NQA 3.09-5.01 (445/8801-V-02; 446/8801-V-02).

Based on the review performed of these QA-related activities, it appeared, except for the one example cited above, that the applicant was properly implementing procedural requirements.

b. Applicant Reviews of the QA Program Effectiveness

This portion of the inspection was performed to verify that the applicant was adequately reviewing the effectiveness of the QA program. The following items were reviewed.

Audits were performed by the internal audit group to assess the effectiveness of the QA program. The audits included reviews of the operations, startup, contractor, and design and construction QA programs. The NRC inspector reviewed seven 1987 audits performed by the internal audit group on the operations, construction, startup, and design organizations. The NRC inspector noted that each of the audits reviewed was well structured, adequately evaluated the QA programs, and was performed by qualified individuals. In each case where a deficiency was identified by the audit team; the deficiency response was provided within the specified time frame, the deficiency response contained adequate corrective actions, and the actions were taken in a timely manner. No problems were noted during review of this item.

The effectiveness of the QA program was evaluated through audits by an organization independent of any of the applicant's organizations. The NRC inspector reviewed

such an audit performed by the Joint Utility Management Audit (JUMA) group. The JUMA group was composed of personnel from other utility companies with QA backgrounds, including two individuals with direct QA responsibilities. The audit was performed in the areas of internal audits, technical audit program, vendor compliance, quality engineering, and quality surveillance. A review of the audit indicated that one deficiency was noted in the area of vendor compliance and observations in the other areas. No problems were noted that compromised the overall effectiveness of the QA program. The applicant provided adequate corrective action to the deficiency and observations identified by the JUMA group.

No problems were noted during evaluation of the applicant's program for evaluating the effectiveness of the QA program.

c. Corporate/Site QA Interface

This area was reviewed to determine the adequacy of the corporate/site QA interface and to verify that applicant upper management was routinely informed of the status of the QA program. This review was performed by evaluation of the following items.

The onsite QA management routinely reports the status of the QA program to corporate management through an annual report that is published and provided to corporate management for review. The report, "Annual Assessment of the Overall Effectiveness of the QA Program," compiled data gathered over the preceding year and discussed the areas of the QA program that need additional management attention. After review of the report by corporate management, action items were assigned by the QA overview committee to the plant staff for completion. The items assigned were structured to ensure that the adverse QA trends were corrected. During follow-up meetings of the QA Overview Committee, adequate completion of these action items will be verified.

The NRC inspector reviewed the annual assessment report issued for 1986. The NRC inspector noted that the report was comprehensive and identified areas where additional management attention was required. The areas identified in the report appeared to be appropriately developed based on the data provided in the report. The NRC inspector also noted that action items had been appropriately assigned based on the report content. The action items were assigned and follow up provided, as discussed below.

Regularly scheduled reviews of the QA Program were performed on site to evaluate the QA program effectiveness. The onsite review meetings were attended by corporate personnel.

The applicant established an onsite QA overview committee (QAOC) to review the implementation of the QA program each month. Each of the monthly meetings was attended by a representative from the corporate management organization. At the meetings, QA weaknesses were identified, discussed, and actions assigned. In addition, the action items assigned during review of the annual assessment of QA program effectiveness by corporate management were tracked to ensure timely and adequate closeout of the items. The QAOC reviewed trend reports that were published monthly by the manager, Operations QA. A review of the trend reports by the QAOC resulted in the identification and assignment of additional action items to the appropriate individuals. NRC representatives have attended several of the QAOC meetings.

The NRC inspector reviewed recent meeting minutes (May 1987 through October 1987) of the QAOC to verify that QA program weaknesses were identified and action items assigned. The review included a verification that the action items assigned, based on the annual assessment, were addressed and corrective actions taken. In this review, it was also verified that the monthly trend reports on the QA program were reviewed by the appropriate levels of management. Based on the reviews performed by the NRC inspector, it appeared that the applicant had established a program that would ensure an acceptable interface was maintained between the site and corporate QA organizations.

No problems were noted during the review of the corporate/site QA interface program. Evidence reviewed indicates a strong involvement of corporate management in the total QA program.

d. Design Program Review

This element was reviewed to verify that the applicant had established a program for control of QA design activities by the contractor design organization. The items reviewed in this area are discussed below.

The organizational structure that defined the lines of responsibilities between the applicant and the design contractor were established. The NRC inspector reviewed procedures to verify that interfaces between the applicant and contractor had been adequately established. The review focused on the methods used for approval of design documentation and subsequent changes to the documentation within the contractor's organizations, receipt and handling of design input from organizations outside the contractor's organization, and the applicant's review of documentation to verify that the design provided by the contractor was adequate.

The principal design contractor performed its safety-related design activities within the requirements established by an approved QA program. The NRC inspector verified that the applicant had performed a review and accepted the contractor's QA program as described in their QA manual. The NRC inspector also reviewed six procedures in the contractor's QA manual to assure that the contractor's defined interfaces correlated with the interfaces established by the applicant. The review of selected procedures also verified that the contractor had established an appropriate overall QA program.

Audits were performed by the applicant of the contractor's QA activities related to design efforts. The NRC inspector reviewed four audits that were performed. The NRC inspector noted that the audits were comprehensive, provided an in-depth review of the activities, and were performed by qualified individuals. For the items reviewed, it appeared that the contractor provided timely corrective actions for the deficiencies identified by the auditors. Based on a review of the audits performed, it appeared that the applicant was adequately monitoring the contractor's design activities.

No problems were noted during the review of this portion of these inspection.

e. Procurement Activities

This element was reviewed to verify that the applicant had established a procurement program in accordance with the applicable regulations and that the program was being implemented. The items reviewed are discussed below.

The applicant had established a program for issuing and maintaining an approved vendors list (AVL) and implemented the requirements of the program. The NRC inspector reviewed the program established by the applicant for qualification of vendors, suppliers, and contractors that were included on the AVL and reviewed the program for maintaining an organization on the AVL once initial qualification was established. Included was a review of procedures, vendor initial qualification documentation, and the documentation generated to maintain a vendor on the AVL. The review also included discussions with personnel responsible for implementation of the program. It appeared that an adequate program had been established.

Purchase orders and/or contracts were issued to vendors that were properly qualified by audit or source inspection. The NRC inspector reviewed purchase orders and contracts to ten different suppliers to verify that the purchase document was issued to a vendor that had been qualified prior to issuance of the purchase document. In each case reviewed, the vendor had been properly placed on the AVL prior to issuance of the procurement documentation. In addition, each procurement document contained, as appropriate, a statement noting that 10 CFR Part 21 was effective for the vendor providing the material or service.

Audits were performed on vendors in accordance with established requirements to properly qualify vendors for inclusion on the AVL. The NRC inspector reviewed four audits performed by the applicant on vendors that had been placed on the AVL. The audits reviewed by the NRC inspector were completed in accordance with established requirements, were performed by qualified individuals, and were of sufficient depth to assure that the audited organization adequately implemented an effective QA program.

An audit schedule had been established to assure that vendor audits were performed on a regularly scheduled basis such that vendor performance was reviewed as required by the QA program. The NRC inspector reviewed the audit schedule for 1987 and verified that the vendors that required a triennial audit were scheduled. The NRC inspector reviewed the audit results for four vendors to verify that the audit was performed when scheduled. A review of the audit schedule for 1988 was performed to verify that the triennial audit for the appropriate vendors had been scheduled. The NRC inspector also reviewed the documentation related to the vendor annual evaluation performed by the applicant. The established QA program requires an annual evaluation be performed in

the years when a triennial audit was not performed. The NRC inspector verified that the applicant was completing the annual evaluations.

f. Audit Program

This QA program element was reviewed to verify that an adequate audit program had been established by the applicant. The items reviewed within this area are discussed below.

The audit program has been established by the QA program and is being implemented in accordance with the QA program requirements. The NRC inspector reviewed procedures issued for implementation of the audit program. Review of the procedures indicated that the audit program had been established in accordance with the requirements of the QA program. The NRC inspector reviewed documentation of seven audits to verify that the audit program was being performed in accordance with the implementing procedures.

Audits were being performed by qualified individuals. The NRC inspector reviewed the qualifications for personnel performing the seven audits inspected. The review was performed to verify that each auditor had received the established training and that the individual's background was appropriate for the audit being performed. During review of this item, the NRC inspector noted that Audit TUG-87-17, "Inservice Inspection," dated August 21, 1987, was performed by individuals that did not appear to have strong technical expertise in the area of inservice inspection. The NRC inspector performed an in-depth review of Audit TUG-87-17. Based on the review, it appeared that an adequate audit had been performed by the auditors assigned.

The applicant recognized the need to maintain technical expertise within the audit group. To upgrade the technical expertise in the audit group, the applicant commenced staffing the group in September 1987 with personnel having technical expertise in the areas of emergency planning, licensed operations, health physics, inservice inspection, and radiological waste activities. Staffing of the audit group with personnel of this type was viewed by the NRC inspector as a positive move toward assuring that audits were performed by experienced auditors with proper technical backgrounds.

An audit schedule was issued for each audit period that included all areas required by the QA program. The NRC inspector reviewed the audit schedules for 1987 and 1988.

The schedules included all areas required by the QA program. A review of the 1987 schedule was performed to verify that the audits were performed as scheduled. The review indicated that all audits were completed except those related to plant operations. Some audits were rescheduled during the year; however, the audits were completed such that audit performance met the established frequency for each QA activity.

Audits performed by the applicant were performed in accordance with the QA program requirements. The NRC inspector reviewed seven audits performed during 1987 to verify that the audits were adequate. Based on the review performed, it appeared the audits were done properly in that a preapproved checklist was used, the audit depth and scope was satisfactory, audit results were discussed with the audited organization, deficiencies and/or observations were appropriately identified, audit reports were issued in a timely manner, adequate deficiency responses were provided by the audited organization, and the deficiency responses received timely review and close out by the audit organization.

Based on the reviews performed, as discussed above, it appeared that the applicant had established and implemented an adequate audit program.

g. Conclusions

Based on the review of the elements of the QA program, as discussed above, the inspector concluded that the applicant had established and implemented a comprehensive QA program. The procedures issued for program implementation clearly defined the organizational responsibilities and provided specific guidance on how the responsibilities were to be performed. With the exception of the one violation identified during this inspection, it appeared, based on the sample reviewed, that the organizations were adequately implementing the procedural requirements during the performance of safety-related activities. Based on an overall review of the QA program, it appeared that the applicant relied on the performance of audits by the internal audit group to assure that safety-related activities were performed in accordance with procedures. Since the applicant has established a strong audit organization with strong technical expertise, deficiencies in the QA program should be readily identified, and based on recent performance, should be corrected in a timely manner.

7. Plant Tours (92700)

The NRC inspectors made frequent tours of Unit 1, Unit 2, and common areas of the facility to observe items such as house-keeping, equipment protection, and in-process work activities.

Cable Spread Room - Structural Framework

As reported in NRC Inspection Report 50-445/8732; 50-446/8724, the NRC inspector had identified instances of apparent improper bolted connections. During follow-up inspection an additional concern arose regarding whether the structural framework, which supports most of the cable trays in the Unit 1 cable spread room, had been properly evaluated by engineering. The concern was resolved as follows. The applicant provided copies of the original drawings used to erect the structural framework. After reviewing the drawings, the NRC inspector determined that these drawings had provided sufficient detail for the construction and inspection of the original framework. For example, the drawings provided the size, type, location, orientation, and elevation of the columns and the cross members of the structure.

The drawings also provided the details for the bolted connections. In 1982 and subsequent to the completion of the framework, a set of as-built drawings detailing the framework and attachments was compiled by engineering. The as-built drawings are referred to as FSEG as-built Unit 1, Sheets 1-81. These FSEG drawings list the attachments and the loads for each of the crossbeams and columns and, hence, the FSEG drawings were utilized by SWEC as the basis for compiling a computer model of the framework to determine its integrity under load. Modifications to the loads, such as those occurring out of the CAP are included in the computer model. In addition to performing the evaluation of the framework, SWEC is in the process of issuing a new set of drawings for the Unit 1 cable spread room framework. The new drawings will incorporate the recent modifications and will be issued in the current format required by engineering. To preclude the possibility of changes by other contractors affecting the SWEC evaluation, all modifications to the framework must be approved and evaluated by SWEC.

The NRC inspector did not perform an evaluation of the adequacy of the SWEC activity as the intent of the inspector's review was to establish that an engineering evaluation of the Unit 1 cable spread room framework had been performed and that it included or accounted for recent modifications. The NRC inspector considers that concern as being properly addressed.

No violations or deviations were noted. No further NRC inspection is planned.

8. Open Items

Open items are matters which have been discussed with the applicant, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or applicant or both. One open item disclosed during this inspection is discussed in paragraph 6.a.

9. Exit Interview (30703)

On January 29, 1988, R. F. Warnick, H. H. Livermore and J. S. Wiebe met with L. D. Nace and A. B. Scott to discuss January inspection findings and other matters. (See NRC Inspection Report 50-445/88-06, paragraph 5.)

An exit interview was conducted February 2, 1988, with the applicant's representatives identified in paragraph 1 of this report. No written material was provided to the applicant by the inspectors during this reporting period. The applicant did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection. During this interview, the NRC inspectors summarized the scope and findings of the inspection. The applicant acknowledged the findings.