

APPENDIX C

CONSTRUCTION INSPECTION REPORT

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-445/86-08
50-446/86-06

Permits: CPPR-126
CPPR-127

Dockets: 50-445
50-446

Category: A2

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

Construction Permit
Expiration Dates:
Unit 1: August 1, 1988
Unit 2: August 1, 1987

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

Inspection At: Glen Rose, Texas

Inspection Conducted: April 1 through May 31, 1986

Inspectors: H. S. Phillips
H. S. Phillips, Senior Resident Reactor
Inspector, Construction, Region IV
CPSES Group
(paragraphs 1, 2, 3, 4, 5.a, and 7)

3/24/87
Date

P. C. Wagner
P. C. Wagner, Reactor Inspector, Region IV
CPSES Group
(paragraphs 5.b, 5.c, and 5.d)

3/24/87
Date

J. Barnes
for P. Michaud, Reactor Inspector, Region IV
(paragraph 6)

3/27/87
Date

Consultant: Parameter - J. Gibson (paragraphs 5.b, 5.c, and 5.d)

Reviewed by: R. L. Spessard
 R. L. Spessard, Deputy Director,
 Division of Inspection Programs,
 Office of Inspection and Enforcement

3/25/87
 Date

Approved By: I. Barnes
 I. Barnes, Chief, Region IV
 CPSES Group

3/27/87
 Date

Inspection Summary

Inspection Conducted: April 1 through May 31, 1986 (Report 50-445/86-08)

Areas Inspected: Routine, unannounced inspections of Unit 1 which included a review of plant status and plant tour of the safeguards, electrical control, and auxiliary buildings; applicant action on previous inspection findings; and Brown & Root (B&R) audits of site ASME activities.

Results: Within the three areas inspected, two violations (failure of B&R to audit the entire ASME/QA program and to document audits, paragraphs 4.b and 4.c; and failure of Texas Utilities Generating Company (TUGCo) auditor to verify correction of deficiency in audit report TPC-51, paragraph 6) and one deviation (TUGCo QA procedure does not include all criteria for supplemental audits, paragraph 4.c; and B&R QA procedure does not agree with supplemental audit criteria, paragraph 4.c) were identified.

Inspection Conducted April 1 through May 31, 1986 (Report 50-446/86-06)

Areas Inspected: Routine, announced and unannounced inspections of Unit 2 which included a review of plant status and plant tours of the reactor, safeguards, diesel generator, electrical control, and auxiliary buildings; applicant action on previous inspection findings; B&R audits of site activities; electrical cable, tray, and instrumentation installation; and pipe supports/restraints.

Results: Within the five areas inspected, two violations (failure of B&R to fully audit their ASME/QA program and to document audits, paragraphs 4.b and 4.c; and failure of the TUGCo auditor to verify audit deficiency correction, paragraph 6); and one deviation (TUGCo QA procedure does not include all criteria for supplemental audits and B&R QA procedure does not agree with supplemental audit criteria, paragraph 4.c) were identified.

DETAILS

1. Persons Contacted

Applicant Personnel

- ***J. Barker, Executive Assistant to Executive Vice President, TUGCo
- **J. Beck, Vice President, TUGCo
- ***T. Brandt, TUGCo Quality Engineering (QE), Supervisor EBASCO
- ***R. Camp, Assistant Project General Manager, Unit 1, TUGCo
- ***W. Counsil, Executive Vice President, TUGCo
- ***P. Halstead, Manager, Quality Control (QC), TUGCo
- D. McAfee, Quality Assurance (QA) Manager, TUGCo
- *J. Merritt, Director of Construction, TUGCo
- ***J. Streeter, Director of Quality Assurance, TUGCo
- ***T. Tyler, Comanche Peak Response Team Program Director, TUGCo

Contractor Personnel

- J. Leutwyler, QC Supervisor, B&R
- R. Vurpillat, QA Manager, B&R

The NRC inspectors also interviewed other applicant and contractor personnel during this inspection period.

- *Denotes personnel present at the April exit.
- **Denotes personnel present at the May exit.
- ***Denotes personnel present at both exits.

2. Plant Status and General Construction Inspections

a. Status of Units 1 and 2

The NRC inspector reviewed Units 1 and 2 status reports. Unit 1 construction is complete except for changes to the presently configured and constructed plant. TUGCo currently reports Units 1 and 2 as 99.3 percent and 81 percent complete, respectively.

b. General Construction Inspection, Unit 2

The NRC inspector observed work in progress and work to be inspected during future inspections. General housekeeping, in-place storage, and welding rod material control were specifically included in these inspections and were satisfactory.

During heavy rains, the NRC inspector observed water leaking into the electrical area (elevation 852') at the rotofoam joint located over electrical penetrations 2E-37 and 38 at the east end of room 103.

Several months prior to this inspection, this was pointed out to TUGCo management but they failed to locate the leak. In a conversation with the TUGCo director of construction, he stated that TUGCo has a checklist for building leaks and this item will be placed on the list. Because no regulation or commitment was violated, the NRC inspector turned this matter over to TUGCo for resolution.

The NRC inspector observed the in-place storage of the Unit 2 reactor vessel internals and found that all of the internals were outside the vessel until flushing is complete. They were acceptably stored. There was evidence that standard fixtures were used to lift each component. The access to these areas was controlled and shoe coverings were required prior to entering these areas.

No violations or deviations were identified.

3. Action on Previous Inspection Findings, Units 1 and 2

(Closed) Unresolved Item (445/8606-U-01; 446/8604-U-01): Absence of B&R audit checklists for the ASME QA manual and work activities. In February 1986, the NRC inspector reviewed audits CP-17 and 18 (conducted in 1980 and 1981) to determine if certain safety-related welding and related work activities were audited to verify conformance with 10 CFR Part 50, Appendix B Criteria; Final Safety Analysis Report (FSAR) commitments; QA plan/program/manual requirements; American Society of Mechanical Engineers (ASME) III, Division I; and the contractor's QA and construction procedures. Further review of this subject during this inspection has resulted in the unresolved item being upgraded to a violation, which is described in paragraph 4.

4. B&R Audit of Site Activities, Units 1 and 2

- a. Background and Requirements: The NRC inspector confirmed that B&R was responsible for all site audits until about September 1978, when TUGCo assumed responsibility for all audits except for audits of ASME activities. This change was formally documented in FSAR, Section 17.1.2, Amendment 3, dated November 30, 1978. After this date, B&R was responsible for QA functions relating to ASME Code work only and the change stated that primary responsibility for the construction site QA and QC programs lies with TUGCo site QA. The Amendment further states that this QA program is organized to provide an integrated plan under the direct control of the TUGCo management QA.

The B&R ASME/QA Manual, Section 19.0, dated September 17, 1981, requires that the ASME/QA program be audited annually. The NRC inspector reviewed audits to determine if the ASME B&R QA program was fully audited from 1980-1985 and if audits were effective. Sections of the B&R QA manual, which cover design control and special

processes requirements of 10 CFR Part 50, Appendix B, were evaluated in greater depth to assess how effectively these specific requirements were audited.

- b. Audit of B&R Site ASME Activities: The NRC inspector reviewed B&R audit report Nos. CP-17 through CP-31 which covered the period from 1980 through 1985 and part of 1986. This review indicated that parts of the B&R QA program may not have been audited during 1980, 1982, and 1984.

To clarify the above finding, B&R was requested by the inspector to review the same audit reports and more complete audit files in Houston that contained checklists and field notes not presently located at the CPSES site. The results of the B&R review were presented to the NRC inspector in the form of a matrix that is included as Appendix D to this report. This matrix and other supportive documentation confirmed the finding that parts of the B&R QA program were not audited during 1980, 1982, and 1984.

In meetings with B&R and TUGCo management personnel to discuss the above findings, it was acknowledged that several areas were not audited annually. Specifically, the data in Appendix D shows that, in 1980, 12 sections of the B&R QA Manual were not audited; in 1982, 6 sections were not audited; and in 1984, 8 sections were not audited.

The matrix developed by B&R (Appendix D) indicates that the B&R QA program was completely audited for 1981, 1983, and 1985 except for those areas that were not applicable.

This failure to fully audit the entire ASME/QA program is a violation of Criterion XVIII of Appendix B to 10 CFR Part 50 (445/8608-V-01; 446/8606-V-01).

- c. Documentation of B&R Audit Implementation: The NRC inspector selected two criteria (Control of Field Changes and Control of Special Processes) for evaluation to determine if the audits were comprehensive as described by American National Standard Institute (ANSI) N45.2.12, paragraphs 3.1.2 and 3.1.3; i.e., "To verify by evaluation of objective evidence that the documented program has been implemented. To assess the effectiveness of the quality assurance program." Similarly, B&R QA Manual, Section 19.0, requires that objective evidence be provided to show compliance with pertinent specifications, codes, and procedures.

- (1) The NRC inspector reviewed the list of project documents to identify applicable B&R implementing procedures which relate to field changes by B&R construction. The following procedures related to this area:

- . B&R QA Manual, Section 4.0, "Design Control"

- . CP-CPM-4.1 (dated 1981), "Construction Request for Engineering Design Changes"
- . CP-CPM-9.13 (1984, Revision 10), "Modification of Vendor Supplied Catalog Items"
- . CGP-7 (no date), "Control of Field Sketches"
- . WEI-4.6 (1982), "Instruction for Control of Welding Engineering CMC's"
- . CP-QAP-04.01 (1985), "Design Control"
- . CP-QAP-02.04 (1983), "Program for Repair/Alteration of ASME-N Stamped Components"

Audit Reports CP-18 (1981 period), CP-21 and 24 (1983), and CP-27 (1985) were reviewed by the NRC inspector to evaluate B&R audit responsibility for the above areas during 1981, 1983, and 1985 that is shown as having been audited in the matrix (Appendix D).

The above review indicated that the audit report documentation, including the checklists, was deficient in that the NRC inspector could not determine if the B&R design change control function, as specified by the above noted procedures/instructions, had been audited. While the audit reports and checklists do contain references to several relevant QA Manual audit characteristics, the documentation to support the conclusions reached was too sketchy (or non-existent) to show that effective audits had been implemented in this area.

Failure to provide adequate documentation to support implementation of audits in the area of field design changes is a violation of Criterion XVIII of Appendix B to 10 CFR Part 50 (445/8608-V-02; 446/8606-V-02).

- (2) Audit Reports CP-17 through CP-31 were reviewed by the NRC inspector to determine compliance with audit requirements in the area of special processes (Criterion IX of 10 CFR Part 50, Appendix B). In audit CP-17, the B&R auditors looked at in-process welding, observation of weld fitup, cleanliness, use of correct weld process specification, and compliance with welding parameters in the fabrication shop. With the exception of CP-17, the 1980-1985 audit reports generally indicate a heavy emphasis placed upon the audit of personnel/procedure qualification and filler material control procedures and did not show evidence of observation of field welding, compliance with applicable procedures and specification requirements. In discussions with the B&R QA manager and the TUGCo QA manager regarding the documentation of special processes, the B&R QA

manager stated that their audits were better than their reports indicated; however, he agreed that the audits of special processes appear to be deficient as documented. He subsequently arranged to have the auditors discuss this matter with the NRC inspector in further detail. They, too, stated that their audits of special processes were more comprehensive than the reports indicated.

It was observed in Audit Report CP-17 (1980) that the B&R auditors concluded that several aspects relating to their audit of special processes were not evaluated sufficiently to assure conformance with applicable codes and standards and that these areas should be reevaluated during the next audit. The NRC inspector reviewed subsequent audit reports to determine if these specific areas relating to special processes had been audited and documented. The inspector could not find subsequent documentation to confirm reevaluation of these areas and B&R, upon request, has been unable to provide documentation of this specific reevaluation.

Failure to provide adequate documentation of audits performed to insure special process controls were implemented is a violation of Criterion XVIII of Appendix B to 10 CFR Part 50 (445/8608-V-03; 446/8606-V-03).

The NRC inspector developed a matrix of special process procedures to determine how many procedures were audited. Credit was given if mentioned in the report (not necessarily audited). Approximately 12 (one QA Manual Section and procedures) of 75 project documents were referenced or mentioned in B&R audits between 1980-1985. This roughly equates to about 15% of the total or about 3% per year audited.

This item is unresolved pending a demonstration by TUGCo and B&R that a sufficient number of procedural activities were audited to determine compliance with Criterion XVIII (445/8608-U-04; 446/8606-U-04).

- (3) Audit Reports CP-17 through CP-31 were reviewed by the NRC inspector to determine compliance with audit requirements in the area of inspection (Criteria X of 10 CFR Part 50, Appendix B).

The NRC inspector developed a matrix of procedures audited by B&R from 1980-1985 and found approximately 8 of 55 applicable project documents were referred to in the audits. This roughly equates to 15% total and 3% per year partially audited. It appears that one of the main functions of quality assurance, assuring that the inspection process verifies conformance with engineering and construction procedures, may not have been audited frequently enough and to sufficient depth to assure an effective inspection program.

This item is unresolved pending a demonstration by TUGCo and B&R that a sufficient number of procedural activities were audited to determine compliance with Criterion X of 10 CFR Part 50, Appendix B (445/8608-U-05; 446/8606-U-05).

- d. Evaluation of TUGCo and B&R Actions to Correct Previous Audit Program Deficiencies: The inspector evaluated the items of noncompliance concerning B&R's performance in the area of QA audits (as described above) and the similarity of these findings to other reported deficiencies observed in the past and that have resulted in a previous Notice of Violation (84-32/11). It is clear from this evaluation, which refers to both reviews and audits conducted many years ago* along with more recent findings, including those currently being addressed, that TUGCo's actions over time to correct and improve its overall audit function have not been fully successful. The inspector's basis for this conclusion is as follows.

The items of noncompliance concerning B&R audit program deficiencies reported herein for the years 1980, 1981, 1982, 1983, 1984, 1985, and 1986 appear to be similar and are apparently connected to other previously identified items of noncompliance, specifically those reported in NRC Inspection Report 50-445/84-32, 50-446/84-11 concerning the licensee's role as auditor of the overall construction project. The B&R audit program is an integral part of the licensee's QA audit program and the findings in this report appear to be further examples of audit program deficiencies, although it is recognized they relate to a contractor's audit program.

Also, it is observed that the items of noncompliance appear to have a connection to findings and recommendations stemming from an external Management QA Audit [Management Analysis Corporations (MAC-JPJ-471, Page 5, Item 9)] performed during a much earlier time frame (1978). Additionally, and of a more direct nature are the similar findings and recommendations reported directly to B&R in external audits (MAC-77-66, Management Summary, Items 12 and 15) performed in about the same time frame and dealing with apparent QA audit program weaknesses. The above mentioned external audit reports were not provided to the NRC until 1985; i.e., after the time frame that the 50-445/84-32, 50-446/84-11 inspection was performed. Those reports were, however, reviewed during this inspection.

* Consultant Reports MAC-77-66 (1977), MAC-JPJ-471 (1978), P. S. Lobbin (1982), and NRC Reports 82-25/13 (1982), 83-18/12 (1983), Comanche Peak special Team Report (July 1984), 84-32/11 (Sep 1984), and Supplemental Safety Evaluation Report No. 11.

At the time NRC Inspection Report 50-445/84-32; 50-446/84-11 was issued, the option was offered and accepted by TUGCo letter TXX-4453 dated March 11, 1985, whereby the licensee elected to respond to violations contained in this report as part of the Comanche Peak Response Team Program Plan. However, this option did not include any delay relative to assuring that all audit program deficiencies, including deficiencies in site contractor's audit programs, were promptly identified and corrected to preclude repetition. Rather, it was NRC's understanding and expectation that these violations, together with related pertinent external source issues (e.g., TRT, MAC) would be specifically included in the assessments performed by Issue Specific Action Plans (ISAPs) VII.a.4 and VII.a.5, given the scope of each. As a result of NRC review of the results reports for these ISAPs, it is apparent that the results reports, in themselves, do not explicitly identify and describe the disposition of these external source issues. This is a matter of concern when viewed in the light of the findings noted in this report regarding the B&R audit program and will be the subject of separate correspondence from the NRC.

- e. B&R QA Manual and Implementing Procedures for Auditing: The NRC Inspector reviewed the B&R QA Manual, Section 19.0, "Audits," dated February 15, 1985. B&R procedures which implement the audit program and applicable revisions were also reviewed. These procedures were compared to the TUGCo QA Manual and implementing procedures to determine if they conformed to TUGCo's overall QA program. It was determined that Section 19.0 of the B&R QA Manual is consistent with TUGCo QA Plan, Section 18.0, dated July 31, 1984; however, B&R Procedure CP-QAP-19.1 is inconsistent with TUGCo implementing Procedure DQP-QA-15, Revision 0, dated September 9, 1985. Specifically, paragraph 3.4.5 of the B&R procedure states that supplemental/special audits and investigation may be performed if certain adverse trends occur in the QA program while TUGCo Procedure DQP-QA-15, Revision 0, dated September 9, 1985, states that audits are performed when adverse trends occur.

In an earlier B&R procedure (CP-QAP-18.1 issued in 1975), it was stated that supplemental audits shall be performed and this wording was used in subsequent revisions until January 15, 1982, when CP-QAP-19.1 was issued. This change in requirement is a deviation from FSAR, Section 17.1.2, which commits to ANSI N45.2.12. ANSI N45.2.12 states that supplemental audits are conducted when the following conditions are evident: significant QA program changes occur, a safety-related item is in jeopardy due to QA program deficiencies, an independent assessment of an item's quality or program effectiveness is necessary, or it is necessary to verify the implementation of corrective action. This change to supplemental audit criteria is a deviation from paragraph 3.4.3 of ANSI N45.2.12, Draft 3, Revision 0 (445/8608-D-06; 446/8606-D-06).

Also, during the above comparison, the NRC inspector noticed that TUGCo's criteria for supplemental audits deviate from ANSI N45.2.12 criteria. That is, two criteria (described in paragraphs 3.4.3.1 and 3.4.3.5 which require assessment of contractor's QA program prior to contract award and assessment of item quality or program effectiveness) were not incorporated into TUGCo Procedure DQP-QA-15, Revision 0. The failure to incorporate these criteria is a deviation from the commitment to paragraph 3.4.3 of ANSI N45.2.12, Draft 3, Revision 0 (445/8608-D-07; 446/8606-D-07).

5. Electrical Cable, Tray, & Instrumentation Installation, Unit 2

a. Electrical Cable Pulls:

- (1) Procedures - The NRC inspector reviewed TUGCo Instruction QI-QP-11.3-26, Revision 27, "Electrical Cable Installation Inspection" which describes work attributes such as pull card preparation, raceway cleanliness, conduit swabbing, raceway identification, cable condition, cable pulling operation, cable splicing, cable tie material/spacing, separation criteria and cable repairs, that must be inspected. These applicable attributes for controlling work activities and other specific work were observed as described below.
- (2) Observation of work - The NRC inspector selected and observed two cable pulls which were the result of a request for rework. The cables (1 SHLD TW PR 16 AWG 600V Instrument, material type code W-465) were pulled from (a) junction box (JB)2S35G to JB2S224G, and (b) JB2S35G to JB2S223G. The following in-process controls were observed: latest approved procedures and pull card available, cables and pulling compounds as specified, tension measuring device not needed, cable temperature acceptable, raceway/conduit complete, cable free from defects, cables protected from sharp edges/minimum bend radius, cable routing correct, separation criteria checked, cable supports provided, cable slack (minimum) in junction box acceptable, access by scaffolding checked, cable trays/conduits free from debris, coiled cable properly secured, unterminated cable ends protected, QC inspector present/knowledgeable, nonconformance report (NCR) properly handled.
- (3) Records - The NRC inspector reviewed inspection report Nos. 2-0090547 and 2-0090552 for electrical installation and identification of EG246135 and EG246137 pulled in safeguards building room 77S at the 810 foot elevation.

No violations or deviations were identified.

- b. Safety-Related Cable Tray installation: The NRC inspector observed two cable tray sections (T230SF005 and T240SDA94) in the auxiliary building that were not bolted down to their supports. In some

places, the trays were not touching the supports. The NRC inspector also noted that cables were installed in the trays. This item was referred to the applicant to determine why this condition existed, and the answer provided by the applicant to the NRC inspector was that there are no specifications or procedural requirements for the trays to be bolted down prior to final turnover of the plant to operations.

The NRC inspector subsequently reviewed TUGCo Instructions QI-QP-11.3-24, Revision 14, dated September 18, 1985, "Class IE Cable Tray Raceway Inspections," and QI-QP-11.3-26, Revision 24, dated October 11, 1985, "Electrical Cable Installation Inspection." The NRC inspector concurs with the applicant's statement that no procedural requirements exist pertaining to the bolting down of cable trays prior to cable installation. The NRC inspector also reviewed B&R Engineering Instruction EEI-7, Revision 5, dated October 8, 1982, "Cable Pulling." Paragraph 3.3.2 of this procedure states with respect to pre-pulling activities, "Raceway is adequately supported for cable pulling activity."

The NRC inspector determined that the lack of specific requirements regarding cable tray supports, including bolting, prior to cable installation, may constitute procedural deficiencies. This item is open pending additional inspections by the NRC inspector in a subsequent inspection period (446/8606-0-08).

- c. Instrumentation Tubing Installation: The NRC inspector identified tubing associated with pressure transmitter 2PT-965, near root valve 2SI-061, which had an inverse slope, and appeared to have been "stepped" on. A scaffold had been erected below the tubing run, resulting in the tubing being approximately 1 foot above the floor of the scaffold. There was no evidence of protection of the tubing from adjacent work activities. Upon identification of this condition to the applicant by the NRC inspector, NCR I-86-201579 was initiated. The NRC inspector observed that this condition was an isolated occurrence (446/8606-0-09).
- d. Pressure and Flow Transmitter Installation: Also, during the above mentioned inspections, the NRC inspector identified that there were loose gland packing nuts on the isolation and drain valves associated with pressure transmitter 2PT-965, and flow transmitter 2FT-4560. The NRC inspector further identified loose gland nuts on approximately 25 instrument related valves in addition to the two cited examples. Identification of the two examples to the applicant resulted in the initiation of NRC I-86-201578, which pertains to 2FT-4560.

The applicant subsequently provided the NRC inspector information from the valve manufacturer (Kerotest Manufacturing Corporation) that the valves in question (Model D-22) require no specified torque on the gland nut. These valves utilize an integral diaphragm assembly,

installed between the stem and disc, to provide the primary pressure boundary. The packing with its retaining gland nut serves as the pressure boundary only in the event of the diaphragm rupture. The NRC inspector had no further questions on the subject.

No violations or deviations were identified.

6. Pipe Supports/Restraints, Unit 2

The NRC inspector reviewed TUGCo QA audit TCP-51 (September 1982) and found that deficiency No. 1 of this audit concerned operation travelers (for ASME moment restraints) that had been transmitted to the permanent records vault without being routed to the QA Document Review Group (DRG) as required by CPM-6.3 and QI-QAP-11.1-38. TUGCo memo CPPA-24174 dated October 22, 1982, called for corrective action to identify which travelers had been sent to the vault without DRG review and to submit a list of these travelers to DRG. This action was apparently never taken.

B&R letter 35-1195 dated February 3, 1983, stated, in part, "They will be reviewed eventually, prior to N-5 Data Report signoff." A revised response on February 4, 1983, changed actions to be taken associated with another audit comment, but did not include a statement addressing the need to review the travelers already in the vault. This revised response was used as a basis for completing corrective actions and closing deficiency No. 1 per memo QTN-910 dated February 17, 1984. TUGCo Procedure CQI-CS-4.6, Revision 3, dated August 8, 1982, requires that auditors verify implementation of corrective action commitments. The deficiency was apparently closed without verification that the operation travelers had been identified or reviewed. The operation travelers in question have, in fact, been reviewed per Procedure CP-QAP-12.1; Mechanical Component Installation Verification, N-5 Certification.

This failure to assure complete corrective action for audit deficiency No. 1 in audit report TCP-51 is a violation of Criterion XVI of Appendix B to 10 CFR Part 50 (445/8608-V-08; 446/8608-V-10).

7. Exit Interview

Exit interviews were conducted May 8 and June 3, 1983, with the applicant's representatives identified in paragraph 1 of this report. During these interviews, the NRC inspectors summarized the scope and findings of the inspection. The applicant acknowledged the findings.

Subsequent to the exit, the applicant presented additional information concerning a potential violation discussed during the exit. This information showed that no violation occurred.

APPENDIX D

B&R Matrix of Annual Audits of ASME/QA Program (1980-1986)

The NRC inspector identified instances where the QA program was not audited. B&R management was requested to provide a matrix of areas that they could claim credit for auditing to compare with the NRC inspector's findings concerning areas audited. The following matrix provided by B&R shows areas which were not audited.

QA MANUAL SECTIONS	AUDITS PERFORMED (1)							
	1980	1981	1982		1983			
	CP-17 9/16-19	CP-18 9/21-28	CP-19 3/16-18	CP-20 6/21-25	CP-21 4/17-20	CP-22 4/25-29	CP-23 8/1-4	CP-24 12/12-14
Authorized Nuclear Inspector	0	X	N	X	N	N	X	N
Audits	X	X	X	N	N	X	N	0
QA Records	X	X	X	X	X	N	X	N
Corrective Action	X	X	X	N	N	X	N	N
Nonconforming Items	0	X	X	N	N	X	N	N
Exam & Process Status	0	X	X	N	N	X	N	N
Handling & Storage	X	X	0	0	X	N	N	X
Control of M & TE	0	X	N	X	N	N	X	N
Test Control	0	X	N	X	N	X	X	N
Exams, Tests & Inspections	0	X	X	N	N	X	N	N
Control of Special Processes	X	X	N	X	N	N	X	N

(1) See page 4 for explanation of symbols.

QA MANUAL SECTIONS	AUDITS PERFORMED							
	1980	1981	1982		1983			
	CP-17 9/16-19	CP-18 9/21-28	CP-19 3/16-18	CP-20 6/21-25	CP-21 4/17-20	CP-22 4/25-29	CP-23 8/1-4	CP-24 12/12-14
Identification & Control of Items	0	X	0	0	X	N	N	X
Control of Purchased Items & Services	0	X	X	N	X	N	N	X
Document Control	X	X	0	0	X	X	X	N
Instructions Drawings & Procedures	0	X	X	N	X	N	N	N
Procurement Document Control	0	X	0	0	X	N	N	X
Design & Control	0	X	0	0	X	N	N	X
Organization	0	X	0	0	X	N	N	N
QA Program	X	X	N	X	X	X	N	N

QA MANUAL SECTIONS	AUDITS PERFORMED						
	1984		1985			1986	
	CP-25 3/19-21	CP-26 7/30-8/1	CP-27 1/14-17	CP-28 4/22-25	CP-29 8/19-21	CP-30 1/20-22	CP-31 4/5-7
Authorized Nuclear Inspector	0	0	X	N	N	X	N
Audits	NS	NS	NS	NS	NS	NS	NS
QA Records	0	0	X	N	N	X	N
Corrective Action	N	X	X	X	N	N	X
Nonconforming Items	N	X	N	X	N	N	X
Exam & Process Status	N	X	X	N	X	N	N
Handling & Storage	0	0	X	N	N	X	N
Control of M & TE	0	0	X	N	X	N	N
Test Control(2)	N	X	0	0	0	0	0
Exams, Tests & Inspections	N	X	N	N	X	N	N
Control of Special Processes	0	0	X	N	X	0	0

(2) Hydrostatic testing not performed during 1985

QA MANUAL SECTIONS	AUDITS PERFORMED						
	1984		1985			1986	
	CP-25 3/19-21	CP-26 7/30-8/1	CP-27 1/4-17	CP-28 4/22-25	CP-29 8/19-21	CP-30 1/20-22	CP-31 4/5-7
Identification & Control of Items	0	0	X	N	N	X	N
Control of Purchased Item & Services	0	0	X	X	N	X	N
Document Control	X	X	X	X	N	N	X
Instructions Drawings & Procedures	X	N	N	X	N	N	X
Procurement Document Control	0	0	X	N	N	X	N
Design & Control	0	0	X	N	N	X	N
Organization	X	X	N	X	N	N	X
QA Program	X	N	N	X	N	N	X

Code:

0 - Area not audited

X - Area was audited

N - Previously or subsequently audited which satisfied annual requirement

NS - No site audit group which corporate could audit