

U. S. ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS  
REGION IV

RO Inspection Report Nos. 50-445/74-03 and  
50-446/74-03

Docket Nos. 50-445 and  
50-446

Applicant: Texas Utilities Generating Company  
1506 Commerce Street  
Dallas, Texas 75201

License No. None  
Category A

Facility: Comanche Peak Steam Electric Station

Location: Somervell County, Texas

Type of Licensee: W, PWR, 1161 MW(e)

Type of Inspection: Special\*, Announced

Dates of Inspection: July 18 and 19, 1974

Date of Previous Inspection: June 27 and 28, 1974

Principal Inspector: G. S. Madsen  
R. C. Stewart, Reactor Inspector

7/30/74  
Date

Accompanying Inspectors: G. S. Madsen  
W. A. Crossman, Senior Reactor Inspector

7/30/74  
Date

G. S. Madsen  
W. G. Hubacek, Reactor Inspector

7/30/74  
Date

Other Accompanying Personnel: None

Reviewed By: G. S. Madsen  
G. L. Madsen, Chief, Reactor Construction and  
Operations Branch

7/30/74  
Date

\* Quality Assurance Program for Limited Work Authorization

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Texas Utilities Generating  
Company

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July 30, 1974

in the Public Document Room. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,

E. Morris Howard  
Director

Enclosure:

RO Inspection Report No. 50-445/74-3  
and 50-446/74-3

bcc w/o enclosure:

H. D. Thornburg, RO:HQ (1)

RO:HQ (4)

~~DR~~ Central Files (1)

L:HQ (4)

PDR:HQ

Local PDR

DTIE

NSIC

State of Texas, Department of Health

SUMMARY OF FINDINGS

I. Enforcement Action

None

II. Licensee Action on Previously Identified Enforcement Matters

None outstanding

III. New Unresolved Items

None

IV. Status of Previously Reported Unresolved Items

None outstanding

V. Design Changes

None

VI. Unusual Occurrences

None

VII. Other Significant Findings

- A. More specific delineation of interface activities and responsibilities will require revision of QA and QC procedures. (Details, paragraph 3.a.)
- B. Additional F&N QC procedures are required to meet and facilitate commitments associated with the above responsibility requirements. (Details, paragraph 3.a. & 4.d.)
- C. F&N QC Procedure, Appendix I, "Conduct of Audits" was observed to be discrepant in several areas. (Details, paragraph 3.f.)
- D. TUSI is expanding the CPSES QA Plan to include specific surveillance activities for construction of the SSI dam. (Details, paragraph 3.d.)
- E. Brown & Root on-site construction procedures have not been fully developed. (Details, paragraph 5.c.)

### VIII. Management Interview

On July 19, 1974, at the conclusion of the inspection, the inspectors met with TUSI management to discuss the preliminary results of the inspection. The following individuals were present:

H. C. Schmidt, Manager, QA  
R. W. Caudle, Project Manager, Nuclear Plants  
R. H. Hickman, Project Engineer, CPSES  
A. H. Boren, QA Engineer  
A. Vega, QA Engineer  
B. J. Murray, Civil/Structural Engineer

The inspectors described the purpose of the inspection. The significant findings in Section VII of the Summary were discussed at length.

TUSI personnel provided a schedule for procedure development as follows:

September 1, 1974 - All procedures pertaining to excavation.

September 15, 1974 - Actual excavation of the SSI dam to begin.  
(Tentative)

October 1, 1974 - Rock crushing procedures will be completed.

October 15, 1974 - Rock crushing activities to begin.  
(Tentative)

December 1, 1974 - Procedures for backfill and inspection will be completed.

December 20, 1974 - Backfill for SSI dam will begin.  
(Tentative)

REPORT DETAILS

List of Persons Contacted

Texas Utilities Services, Inc. (TUSI)

Mr. R. W. Caudle, Project Manager - Nuclear Plants  
Mr. H. C. Schmidt, QA Manager  
Mr. R. H. Hickman, Project Engineer  
Mr. A. H. Boren, QA Engineer  
Mr. A. Vega, QA Engineer  
Mr. B. J. Murray, Civil/Structural Engineer

Report of Subjects Inspected

1. Scope of Inspection

The scope of the inspection was limited to the review and examination of the quality assurance program procedures and instructions established by Texas Utilities Services, Inc. (TUSI) for that phase of the Limited Work Authorization (LWA) request involving the safe shutdown impoundment dam (SSI).

2. Schedule

The TUSI representative provided the RO inspectors with the tentative SSI dam design completion schedule. The schedule reflects design input document development complete by July 16, 1974, with the final design submitted to TUSI for final review by September 2, 1974.



3. Safe Shutdown Impoundment Dam (SSI) Design

Freese and Nichols (F&N) through the TUSI Project Manager is responsible for the SSI design. His organization takes the soils design information provided by Mason-Johnson Associates (MJA) and develops the design.

The QA Manager of F&N is responsible for the QA activities as they pertain to design and field QA/QC direction.

The F&N QA Engineer is responsible for directing all field QA/QC activities which includes directing the MJA Field Testing Engineer in all QC activities.

a. QA Program

The initial draft (March 20, 1974) of F&N's QA Program was observed to have been developed by Nuclear Services Corporation. The final draft of the program was evolved July 12, 1974, after approximately three interactions; however, the inspector was advised that F&N is still reviewing comments by TUSI on the QC procedures. A draft policy statement indicated that the complete document will be endorsed by a corporate official.

Review of Section 6.0., "Construction Control" revealed several inconsistencies in light of more specific delineation of responsibilities and interfacing activities of F&N, MJA and B&R. Specifically, Section 6.0 must be revised to correct organizational responsibilities in regard to Item 4.5.4. of paragraph "Preparation of Project Specifications, Procedures and Instructions", and as delineated in a letter, R. W. Caudle to L. A. Ashley, 7/15/74, "Organizational Relationships".

Also QC Procedure, Appendix B, "SSI Dam Project External Interface Control" must be revised to reflect the above letter.

Additional QC procedures must be developed by F&N for implementation of additional activities included.

b. Program Commitment

F&N is committed to Appendix B, 10 CFR 50 for design and construction of the dam. The program also declares implementation in accordance with guidance presented in N45.2 and N45.2.11 (Draft No. 3, Rev. 1).

c. Organization

The QA program describes organizational functions in the areas of administration, projects and QA.

The QA Manager is a member of the management council and is responsible for formulating and administering the QA program as it relates to the SSI dam. The QA coordinator is responsible for verification of implementation of the SSI dam QA program.

The QA Manager appears to have the necessary authority for implementation of the QA program with a direct line of communication to a proper level of management.

d. Review of Program by Management

F&N will perform QC of their own activities and a second level surveillance function of inspection and testing. TUSI will audit F&N design activities in accordance with Section 3.0 of the CPSES QA Plan, "Project Construction Surveillance". TUSI is presently expanding on Section 3.0 to include specific surveillance activities for construction of the SSI dam. These will be reviewed and verified for implementation during dam construction.

e. Design Control

A design input document which identifies codes and standards; Regulatory requirements; design criteria and properties of the foundation, abutments, and borrow material; has been developed. Once the excavation has been completed to unweathered rock, design of the dam can be completed.

The design control portion of the program provides for and establishes responsibility for development of design bases; preparation and issuance of drawings and other design documents; and for correction of deficiencies.

No deficiencies were identified by the RO inspector during review of design control procedures.

f. Audits

Review of audit procedure, Appendix I, "Conduct of Audits", revealed that it generally addresses disposition of deficiencies noted during auditing but it does not reference Appendix G, "Corrective Action" as the mechanism for control of deficiency resolution. Also, paragraph 6.19 which addresses review, approval and distribution of the final audit report is not definitive enough from the point of view it does not designate action required for designated responsible personnel. The procedure does not specify an audit schedule.

4. Mason-Johnson & Associates, Inc. (MJA)

- a. The MJA Chief Engineer is responsible for the soils design of the SSI dam. His organization establishes the soils design parameters required for F&N to complete the design.
- b. The MJA Manual (Draft dated 7/8/74) has not been finalized and the letter of promulgation contained therein had not been signed in the space provided for the MJA President, Mr. Raymond C. Mason; however, the MJA program appeared to be adequate for the scope of work to be performed by MJA.
- c. By separate document, MJA has provided TUSI with the soils design parameters and the qualitative acceptance criteria to be maintained during the SSI dam construction.
- d. During the review of the above documents, the inspector observed that, although the above documents were both thorough and comprehensive, the QC procedures for the on-site quantitative testing requirements have not been provided. In discussing this matter with the TUSI representatives, the inspectors were informed that F&N will initiate the development of the applicable outstanding procedures in a timely manner commensurate with the site progress (see Management Interview). This matter will be reviewed during a subsequent RO inspection.

5. Brown and Root, Inc. (B&R)

- a. The B&R Project Manager is responsible for the construction of the SSI dam through the TUSI Resident Engineer.
- b. The B&R Project QA Manager is responsible for collecting all QA documentation required for the dam. In addition, the B&R QA/QC organization is monitoring all B&R construction activities.
- c. The inspector reviewed the applicable B&R QC procedure, CP-QCP-12, "Excavation, Soils Backfill, and Embankments", dated July 1, 1974. It was observed by the inspector that although the document does allude to dam construction, specific reference or requirements relating to the established MJA construction criteria was not apparent. In discussing this matter with the TUSI representatives, the RO inspector was informed that F&N will initiate the development of applicable QC and work procedures for the B&R scope of work. (see Management Interview). This matter will be reviewed during a subsequent RO inspection.