APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-445/84-22
50-446/84-07

Construction Permits: CPPR-126
CPPR-127

Category: A2

Dockets: 50-445
50-446

Licensee: Texas Utilities Electric Company (TUEC)
Skyway Tower
400 North Olive Street
Lock Box 81
Dallas, Texas 75201

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

Inspection At: Glen Rose, Texas

Inspection Conducted: May 19, 1984, through July 21, 1984

Inspectors: J. E. Cummins 10/2/84
J. E. Cummins, Senior Resident Reactor Inspector Date
(paragraphs 1, 2, 3, 4, 7, 8, 9, 10, 11, and 12)

H. S. Phillips 10/2/84
H. S. Phillips, Senior Resident Reactor Inspector Date
(paragraphs 1, 5, 6, 11, and 12)

Other
Accompaning
Personnel: R. VanderBeek, Senior Engineer, EG&G Idaho, Inc.
R. P. Evans, Project Engineer, EG&G Idaho, Inc.
K. A. Ward, Engineer, EG&G Idaho, Inc.
G. R. Thomas, Quality Engineer, EG&G Idaho, Inc.
R. W. Neubacher, Quality Assurance (QA) Inspector, EG&G Idaho, Inc.

Approved: D M Hunnicutt 10/2/84
D. M. Hunnicutt, Team Leader, Task Force Date

Inspection Summary

Inspection Conducted May 19, 1984, through July 21, 1983 (Report: 50-445/84-22)

Areas Inspected: Routine, announced inspection of plant status, action on previous NRC findings, action on licensee identified design/construction deficiencies [10 CFR Part 50.55(e) reports], review of QA manual, QA/control of construction activities, 10 CFR Part 21 inspection, inspection and enforcement bulletin followup, battery room ventilation, licensee investigation of drug use at CPSES, and plant tours. The inspection involved 462 inspector-hours onsite by two NRC inspectors and NRC contract personnel.

Results: Within the ten areas inspected, four violations were identified (failure to maintain a positive pressure on electrical penetrations, paragraph 11; failure to notify the NRC as required by 10 CFR Part 50.55(e), paragraph 4; failure to obtain work authorization to break Brand Industrial Services, Inc. (BISCO) seals and reflect actual as-built configuration on Drawing SG-873-108T-1, paragraph 6.a.(2); failure to properly install, inspect, and document the as-built configuration, paragraphs 6.b.(2) and 6.b.(3)).

Inspection Summary

Inspection Conducted May 19, 1984, through July 21, 1983 (Report: 50-446/84-07)

Areas Inspected: Routine, announced inspection of plant status, action on licensee identified design/construction deficiencies [10 CFR Part 50.55(e) reports], review of QA manual, QA/control of construction activities, 10 CFR Part 21 inspection, inspection and enforcement bulletin followup, battery room ventilation, licensee investigation of drug use at CPSES, and plant tours. The inspection involved 24 inspector-hours onsite by two NRC inspectors.

Results: Within the nine areas inspected, no violations were identified.

DETAILS

1. Persons Contacted

*L. Fikar, Executive Vice President Engineering, Texas Utilities Generating Company (TUGCO)
*W. Clements, Vice President Nuclear Operations, TUGCO
*J. T. Merritt, Assistant Project General Manager, TUGCO
*J. George, Vice President/Project General Manager-CPSES, TUGCO
A. Vega, Site QA Manager, TUGCO
J. Purdy, Shift Supervisor, TUGCO
J. C. Kuykendall, Manager Nuclear Operations, TUGCO
R. Scott, QA Managers Staff, TUGCO
L. Poppewell, Project Engineering Manager, TUGCO
D. Palmer, Operations Shift Technical Advisor, TUGCO
J. Wythe, Lead Instrumentation and Control Engineer, Brown & Root (B&R)
R. Moller, Site Manager, Westinghouse
R. E. Walters, Site NDE Level III, B&R
J. Foland, Nuclear Controls Engineer, Westinghouse
F. Powers, Unit 1 Building Manager, TUGCO
T. Jenkins, Operations Support Superintendent, TUGCO
J. T. Blixt, Quality Engineer Group Supervisor, B&R
D. C. Frankum, Project Manager, B&R
W. I. Vogelsang, Electrical Engineering Supervisor, TUGCO

The NRC inspectors also contacted other plant personnel including members of the construction, operations, technical, QA, and administrative staffs.

*Denotes those attending one or more exit interviews.

2. Plant Status

Construction of Unit 1 is approximately 97% complete with fuel loading scheduled for late September 1984. The licensee continues to complete and turnover systems and areas from construction to operations. The turnover process is accomplished in two phases. The first phase takes place when construction completes a system or area and turns that system or area over to the startup group. The turnover process is completed for a system or area when operations makes final acceptance of the system or area from the startup group. The table below shows the status as of July 20, 1984, of the 422 distinct areas identified by the licensee for turnover from construction to operations:

Total number of areas	422
Number of areas submitted to startup	317
Number of areas accepted by startup	317
Number of areas submitted to operations	117
Number of areas accepted by operations	98

The table below shows the status as of July 20, 1984, of the 331 distinct subsystems identified by the licensee for turnover from construction to operations:

Total number of subsystems	331
Number of subsystems submitted to startup	325
Number of subsystems accepted by startup	323
Number of subsystems submitted to operations	183
Number of subsystems accepted by operations	75

The major construction activities of Unit 1 are essentially complete. The last major construction activity that has not been completed is the application of coatings in the reactor building on the 808' level and the 832' level. The coatings work has been completed in the reactor building on the levels above the 832' level. Although the major construction activities are completed, there are approximately 2300 outstanding (punch list) items that must be resolved prior to fuel load. Resolution for each of these punch list items will be via completion of required corrective action or evaluation that determines that completion of corrective action on the item is not required prior to fuel load. The licensee has established a goal to reduce the number of Unit 1 punch list items per building to 300 or less by August 24, 1984.

Construction of Unit 2 is approximately 65% complete with fuel loading schedule for March 1986.

3. Licensee Action on Previous Inspection Findings

(Closed) Severity Level IV Violation (445/8323-02): Installation and Inspection of Seismic Sway Strut Jam Nuts - Licensee's Procedure CP-QAP-12.1, Revision 11, "Inspection Criteria and Documentation Requirements Prior to System N-5 Certification," has been revised to add specific inspection criteria which requires the quality control inspector to verify that jam nuts on struts and snubbers are tight. On subsequent inspections, the NRC inspectors have routinely checked the tightness of jam nuts and no additional incidents of loose jam nuts have been identified.

(Closed) Unresolved Item (445/8201-07): Procedures for Final Condition Inspection - The licensee has implemented a final condition inspection program to insure that subsequent construction activities in an area do not damage or change the condition of earlier accepted work. The

procedures listed below were prepared and implemented by the licensee to accomplish the final condition inspection program. These procedures were reviewed by the NRC inspector.

- CP-QAP-12.1, Revision 4, "Inspection Criteria and Documentation Requirements Prior to System N-5 Certification"
- QI-QP-11.3-40, Revision 2, "Class IE Electrical Post Construction Verification"
- QI-QP-11.8-14, Revision 1, "Instrumentation System Turnover"
- QI-QP-11.3-29, Revision 4, "Electrical Separation"
- QI-QP-11.3-29.1, Revision 9, "Verify Electrical Separation"
- CP-QP-21.9, Revision 0, "Inspection Verification for Room Turnover"
- CP-CPM-15.2, Revision 1, "Work Activities on Rooms Which Have Been Turned Over"

(Closed) Unresolved Item (445/8328-01): Spacing Issue Concerning Nuclear Instrument System (NIS) Conduit and Fluorescent Lighting Fixtures - A change eliminating the 2' minimum separation requirement between NIS conduit and fluorescent lighting fixtures was incorporated in the Final Safety Analysis Report (FSAR) by Amendment 42.

(Closed) Unresolved Item (445/8110-01): Post Turnover Control and Maintenance of Permanent Plant Instrumentation - The NRC inspector verified that procedures have been issued by the licensee which delineate and control activites involving permanent plant instrumentation equipment. The NRC inspector reviewed the following licensee procedures:

- CP-SAP-6, Revision 6, "Control of Work on Station Components after Release from Construction to TUGCO"
- STA-606, Revision 2, "Maintenance Action Requests"

(Closed) Unresolved Item (445/8201-05.1): Clarification of Instrumentation Installation Activities - Volume XIV, Appendix 17A, Table 17A-1, Sheet 37 and Note 41 of the FSAR have been amended to clarify the apparent inconsistencies in instrumentation installation activities.

(Closed) Unresolved Item (445/8324-01): Splicing of Electrical Cables in Cabinets - Section 8.1.52 of the FSAR was changed by Amendment 44 to clarify the use of splices on safety-related and auxiliary electrical cables inside control panels.

(Closed) Severity Level V Violation (445/8303-01): Failure to Implement a QA Program for the Fabrication and Installation of Electrical Underwater Floodlight Pole Assemblies - The NRC inspector verified that the applicable drawing had been revised to upgrade the underwater floodlight pole assembly seismic requirements. The NRC inspector also reviewed nonconformance reports (NCRs) showing that subsequent rework was accomplished and quality control inspections had been performed.

(Closed) Unresolved Item (445/8201-05.2): Clarification of Instrument Tubing Inspection Requirements - The NRC inspector reviewed the procedures listed below and their related history files. This review verified that the procedures had been changed to include adequate instructional details for the inspection of instrument tubing activities.

- 35-1195-1CP-4, Revision 7, "Instrument Tubing Installation and Inspection"
- CP-Q-11.8, Revision 3, "Instrumentation and Control Inspection Activities"
- QI-QP-11.8-2, Revisions 8, 9, and 12, "Inspection of the Fabrication of Instrumentation Supports and Rack Assemblies"
- QI-QP-11.8-5, Revisions 1, 2, and 13, "Inspection of Instrument Tubing Fabrication, Installation and Instrument Installation"

(Closed) Severity Level V Violation (445/8211-02): Failure to Properly Indoctrinate and Train Personnel Performing Activities Affecting Quality - The licensee QA Procedure CP-QAP-2.1, Revision 9, "Personnel Training and Qualification," has been revised to track (document) a trainee's on-the-job training. The NRC inspector reviewed a complete certification package including the on-the-job training log of a randomly selected trainee and determined that the revised tracking system is working.

(Closed) Open Item (445/8323-08): Bill of Material Not as per Final Review Drawing - The licensee changed Drawing H-CH-X-FB-004-003-3 to reflect that the installed plate is 7/8" thick and performed an analysis to verify that the 7/8" plate was acceptable for use in this specific installation. The licensee also identified and traced down the 7/8" material and determined that this use of the 7/8" material was an isolated occurrence.

(Closed) Unresolved Item (445/8307-02): Protective Coatings Test Procedures - This item is within the scope of the evaluation by the NRC Technical Review Team (TRT) and final disposition will be made in a Supplement to the Safety Evaluation Report (SSER).

(Closed) Unresolved Item (445/8307-03): Protective Coatings Cure Time - This item is within the scope of the evaluation by the NRC TRT and final disposition will be made in an SSER.

(Closed) Unresolved Item (445/8347-01): Protective Coatings on Westinghouse Equipment - This item is within the scope of the evaluation by the NRC TRT and final disposition will be made in an SSER.

The NRC inspector initiated but did not complete a review of the licensee's corrective action for the items listed below. The NRC inspector's findings on these items will be discussed in a subsequent NRC inspection report.

- (Open) Severity Level V Violation (445/8230-01): Failure to Follow Procedures
- (Open) Severity Level V Violation (445/8225-02): Certification of Inspectors
- (Open) Unresolved Item (445/8105-01): Emergency Diesel Generators

No violations or deviations were identified.

4. Action on Licensee Identified Design/Construction Deficiencies (10 CFR Part 50.55(e) reports)

The 10 CFR Part 50.55(e) reports identified in the table below were reviewed by the NRC inspectors and closed. The 10 CFR Part 50.55(e) reports were reviewed for content, compliance with NRC requirements for reporting, appropriate evaluation, and adequacy and implementation of corrective action. Each 10 CFR Part 50.55(e) report is identified and tracked by the unique licensee assigned number shown in the left-most column of the following table:

50.55(e) Report Number	Subject	Licensee Evaluation Reportable (R) or Not Reportable (NR)	Licensee Letter Number
CP 79-08	Installation of Hilti Bolts	R	TXX-3243
CP 82-10	Reinspection of Conduit Supports	NR	TXX-3583
CP 82-09	Solid State Protection System Undetectable Failure	R	TXX-3595
CP 78-05	Anchor Bolt Plates	NR	TXX-867
CP 78-04	Anchor Bolts FAB6 shown on S-814 and Anchor Bolt Schedule S-823	NR	TXX-867

50.55(e) Report Number	Subject	Licensee Evaluation Reportable (R) or Not Reportable (NR)	Licensee Letter Number
CP 77-D	Operation of Safeguard Actuation/ Reset Circuitry (IEB 77-03)	R	TXX-2481
CP 82-07	Governor Drive Coupling	R	TXX-3567
CP 84-10	Rodent Damage to Class IE Electrical Cables	NR	TXX-4175
CP 84-11	Unauthorized Thermo-Lag Installation	NR	TXX-4178
CP 82-03	Reactor Coolant System Wide Range Pressure Instruments	NR	TXX-3571
CP 84-14	Rockbestos Company 10 CFR Part 21 Report, Possible Insulation Damage to Electrical Cable	NR	TXX-4214
CP 84-03	Cracks in Instrument Tubing Supplied by HUB Inc.	NR	TXX-4110
CP 78-02	Catalytic Hydrogen Recombiners	NR	*

*TUGCO QA NCR CP 78-02 was retracted by TUGCO memorandum TUQ-479, dated February 28, 1978. The NRC inspector reviewed the documentation related to Report CP 78-02 and determined that the applicable requirements delineated above had been met.

The NRC inspector initiated but did not complete a review of the 10 CFR Part 50.55(e) reports listed below. The results of the NRC inspector's review will be reported in a subsequent NRC inspection report.

50.55(e) Report Number	Subject
CP 80-01	Unit 1 - Service Water Pumps (Manufacturer's Deficiencies)
CP 81-07	Orifice Plates Outside Tolerance
CP 83-02	Westinghouse Motor Operated Gate Valves

Selected NRC inspector findings are discussed below:

CP 84-04 - Ferroresonant Transformers

The NRC inspector determined from review of documents and discussions with cognizant licensee personnel that between February and May of 1983 three of the four Unit 1 Westinghouse instrument power supply inverters failed. The failure of each of the inverters was caused by a grounded secondary winding of the inverter ferroresonant output transformer (1T on Drawing 4950C67, Sheet 4).

In February 1983 Inverters IV1PC1 and IV1PC3 failed and in May 1983 Inverter IV1PC2 failed. Licensee personnel initiated test deficiency reports and NCRs to document these failures and obtain new transformers to correct the defect. The licensee also initiated action through Westinghouse (the inverter supplier) to determine the cause of the failures, and on November 30, 1983, General Electric (the transformer vendor) issued a fault analysis report which concluded that the cause of the transformer failure was due to the lack of sufficient securing of the center leg to prevent the leg from shifting and vibrating due to the magnetic forces encountered. The vibration abrades the coil insulation and, in time, the coil insulation is penetrated causing the coil to short to the core.

The licensee shipped the affected transformers to General Electric for modifications which are designed to correct the defect. A total of 12 transformers have been shipped by the licensee to General Electric for these modifications.

The licensee received the General Electric fault analysis report on January 16, 1984, and made a verbal 10 CFR Part 50.55(e) report (CP 84-04) to the NRC. The written 10 CFR Part 55.55(e) report was subsequently issued on February 13, 1984. The fact that three out of four Unit 1 safety-related inverters suffered a common cause failure that was identified by the licensee but not reported within the time frame required by 10 CFR Part 50.55(e) is an apparent violation (445/8422-02).

5. Review of QA Manuals and Implementing Procedures

The NRC inspector identified contractors [B&R, Bahnson, Chicago Bridge and Iron (CB&I), Grinell, and Westinghouse] which have performed construction work on site. B&R, as construction manager/constructor, has provided TUGCO with construction services and was responsible for the QA program for ASME Code work. Westinghouse, as nuclear steam supply system supplier (NSSS), has provided TUGCO with the nuclear steam supply system by conducting engineering, design, procurement, and fabrication services for the NSSS and initial supply of nuclear fuel in accordance with a Westinghouse Topical QA Report. Bahnson is responsible for heating, ventilation, and air conditioning. CB&I constructed the containment liner. Grinell is doing the fire protection work. TUGCO and each of the contractors established QA programs consisting of manuals and implementing procedures for controlling site construction activities.

The TUGCO QA organization and program as described in FSAR, Chapters 17.0 and 17.1 describe the QA program for construction. Section 17.1, Amendment 50, July 1984 was reviewed and compared to the TUGCO QA Plan, Revision 2, dated May 21, 1981. Since the Amendment was just approved, the QA plan was in the process of being revised. Corporate QA program, Revision 12 and corporate QA Procedures DQP-QA-1, 2, 2.1, 3, 4, 4.1, 4.2, 5, 6, and 8, DCS-QA-8, and DQP-ST-6 were reviewed.

The NRC inspector also reviewed the B&R Corporate QA Manual, Revision 21, dated June 11, 1984, and B&R ASME QA Implementing Procedures CP-QAP 2.1, 2.3, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1, 8.2, 8.3, 8.4, 10.2, 10.3, 11.1, 12.2, 13.1, 14.1, 16.1, 17.1, 17.2 and 19.1 and QI-QAP-2.1-1, 2.1-4, 2.1-5, 10.2-1, 10.2-2, 10.2-3, 10.2-4E, 11.1-26, and 11.1-40.

BISCO QA Manual, Revision 3, dated May 7, 1984 and Procedure SP-106, Revision 0, dated February 21, 1980 (an implementing procedure for constructing or repairing BISCO penetration seals with silicone caulk) were reviewed and implementation of SP-106 was evaluated in paragraph 6.a. below.

The manuals reviewed above were selected for review because these organizations are currently involved with the small amount of construction work that remains to be done on Unit 1. These manuals and procedures were reviewed to assure that organizational structure and QA personnel, audits, quality requirements, work/quality inspection procedures, material control, special process control, corrective action, document control, test control, measuring/test equipment, and quality records control were established in accordance with FSAR, Section 17.1 and 10 CFR Part 50, Appendix B, Criteria.

No violations or deviations were identified.

6. QA/Control of Construction Activities

The installation of one mechanical and one electrical safety-related element in Unit 1 was selected to evaluate QA/QC control of as-built drawings, work instructions, inspection, NCRs, and materials.

a. Inspection of Penetration Seals

BISCO was contracted to supply and install fire rated and penetration seals. The NRC inspector contacted TUGCO and BISCO personnel responsible for this work effort to determine what work had been completed, was in progress, or was to be accomplished. A general inspection was accomplished by conducting a site tour to observe completed work and work in progress. Subsequently, the following specific work was selected for a detailed inspection.

(1) Review of Penetration Seal Commitment, Procedures and Work Instructions - The NRC inspector reviewed FSAR, Volume X, Section 9.5.1.5.3, paragraph 2, which describes licensee commitment to install penetration seals; Gibbs and Hill Specification 2323-MS-38F, Revision 3; BISCO Procedures DCP-011, "Balance Calibration," CQ-101A, "BISCO Q.C. Personnel Training and Qualification," QCS-101, "Qualification Test for Silicone Foam Material," QCP-101, "Receiving Inspection - Job Site," QCP-103, "Damming Depth and Penetration Inspection," QCP-104, "Sample Evaluation," SP-104, "Formulation of Silicone Foam Material," SP-105, "Installation - Silicone Foam Materials," which describe how the penetrations are installed.

(2) Penetration Installation - On July 14, 1984, the NRC inspector selected and inspected fire rated penetration seals and "as-built" drawings for completeness, size, and location in accordance with B&R Procedure CP-CPM-6.10, Revision 11, dated February 16, 1984, "Inspected Item Removal Notice Form."

Seals selected were from BISCO Internal Work Release (IWR) -0160 for Traces 4001 thru 4006 located in safeguard building Room 52 and IWR-0217 for Traces 5001 thru 5004 located in safeguard building Room 108T. Upon removal of Junction Box Cover JBIS-407 for Seal Trace 5001 and Junction Box Cover JBIS-406 for Seal Trace 5003, it was discovered that these seals had been removed since completion of construction, QC acceptance, and turnover of final "as-built" drawing (SG-873-108T-1) to records vault for storage. Completed IWR-0217 specified a seal material Type SF-20 for Traces 5001 and 5003 which is a two component silicone.

Continued inspection of these two penetration seals showed that seal removal was documented on Penetration Seal Removal Request (PSRR) 1099 for Trace 5001 and PSRR 1098 for Trace 5003. The PSRR records for these seals showed a completed rework (replaced seals) dated February 4, 1984, and January 16, 1984, respectively. The NRC inspector reviewed rework IWR-0217RA which was performed in accordance with Gibbs & Hill Specification 2323-M5-38F, Revision 3, paragraph 3.7.2.3 (fire rated, radiation shielding, and pressure penetration seals).

However, subsequent to the completion of rework IWR-0217RA additional cable has been installed through Penetration Seal Trace 5003 resulting in the removal of the silicone caulking and part of the ceramic fiber from this seal. Review of the master data base does not show Seal Trace 5003 as being damaged or requiring rework. This unauthorized removal or damage of Seal Trace 5003 is in violation of 10 CFR Part 50, Appendix B, Criterion V and B&R Procedure CP-CPM-6.1, Revision 11, paragraph 2.1. (445/8422-03)

(3) Review of Penetration Seal QA Records - The NRC inspector reviewed QA records which included: IWR-0160 and IWR-0217; rework IWR-0217RA; NCRs 007, 009, 012, and 013; material certifications from Purchase Order 3209 for Lots EF-064652/Part A, EF-064653/Part A, EF-064754/Part B, and EF-064755/Part B; and as-built drawings as previously referenced.

Material certifications for Lots EB-024644, EB-024643, and ED-044566 did not include specific statements required to certify that the materials meet the test requirements of ASTM E-119 and IEEE 634 specified in the previously referenced FSAR, Section 9.5.1.5.3. This is an unresolved item pending receipt of an adequate certificate of compliance (445/8422-04)

b. Inspection Of Mechanical Work Activity

The NRC inspector met with TUGCO and B&R personnel to identify mechanical work in progress. It was found that very little work activity remains to be done on Unit 1. B&R had a small amount of ASME work activity in progress and Bahnson Company had heating, ventilation, and air conditioning work in progress. A site tour was conducted to observe completed work and work in progress. The following B&R work had been completed and was selected for a more detailed inspection:

(1) Review of Safety Injection Procedures and Drawings - B&R Procedure QI-QAP-11.1-28, Revision 25, June 11, 1984, "Fabrication and Installation Inspection of Safety Class Component Supports," was reviewed to identify specific inspection criteria. B&R Drawings BRHL-SI-1-SB-019 and SI-1-SB-019 were compared to FSAR flow diagrams in Figure 6.3-1, Volume VIII for as-built configuration.

(2) Inspection of Safety Injection Piping/Component Installation - Utilizing the requirements in the preceding paragraph, the NRC inspector performed a visual inspection of Piping Sections SI-1-SB-19-4 and SI-1-SB-19-5 as shown on Drawing BRP-SI-1-SB-019, which describes the safety injection system located at elevations 802'-4 3/4" and 792'-6" in the safeguards building.

On July 14, 1984, the NRC inspector selected, for visual inspection, Seismic Mechanical Shock Suppressor Mark SI-1-071-002-S32K, which is part of the safety injection system. This system was visually inspected to verify identification, size, configuration, tolerances, material, fasteners, location, welds, and installation as recorded on drawings and specifications and as required by procedures. The support plate was found to be out of dimensional tolerance as per "as-built" Drawing SI-1-071-002-S32K-R2 as follows:

As-Built Dimension	Tolerance	Actual Dimension	Out of Tolerance
0'-6"	1/4"	0'-4 1/2"	0'-1 1/4"
0'7 1/2"	1/4"	0'-9 1/4"	0'-1 1/4"
0'-7 1/2"	1/4"	0'-6 1/4"	0'-1/2"
0'-7 3/8"	1/4"	0'-8 3/4"	0'-1 1/8"
0'-10"	1/4"	0'-8 7/8"	0'-7/8"
0'-9 7/8"	1/4"	0'-11"	0'-7/8"
0'-7 11/16"	1/4"	0'-9 1/8"	0'-1 3/16"
0'-10 3/16"	1/4"	0'-11 3/4"	0'-1 5/16"
0'-7 1/2"	1/4"	0'-6 1/16"	0'-1 3/16"

This failure to document the "as-built" configuration is in violation of 10 CFR Part 50, Appendix B, Criterion V and B&R Procedures and Instructions QI-QAP-11.1-28, Revision 25, dated June 11, 1984. (445/8422-05)

(3) Review of Safety Injection Records - The NRC inspector reviewed the QA documentation that supports the installation of the previously identified seismic mechanical shock suppressor as follows:

- B&R multiple weld data card operation number "2" requires inspection for size. It has been signed as satisfactorily completed on August 12, 1981 per Drawing SI-1-071-002-532K.

- B&R quality control component support checklist "Item 1," dated May 23, 1983, documented that support configuration complied with Vendor Certified Drawing SI-1-071-002-S32K-R2; however, the NRC inspector measured the dimensions and found the configuration different and out-of-tolerance as described in the table above. B&R inspections did not identify this "as-built" error and, therefore, accepted discrepant dimensions and "as-built" drawings as compared to the actual configuration.

This failure to adequately inspect is a violation of 10 CFR 50, Appendix B, Criterion X and B&R Procedure QI-QAP-11.1-28, Attachment 5 and the multiple weld data card. (445/8422-05)

7. 10 CFR Part 21 Inspection

The NRC inspector reviewed documents and held discussions with licensee personnel to verify that the licensee has established and is implementing procedures and controls to ensure that defects and nonconformances are reported to the NRC as required by 10 CFR Part 21.

The following licensee procedures were reviewed by the NRC inspector in conjunction with this inspection:

- CP-QP-16.1, Revision 5, "Significant Construction Deficiencies"
- CP-EP-16.3, Revision 3, "Control of Reportable Deficiencies"
- STA-504, Revision 1, "Problem Report"
- STA-405, Revision 6, "Control of Non-Conforming Materials"
- CP-QAP-6.1, Revision 6, " Preparation of Quality Assurance Procedures and Instructions"
- CP-QAP-7.1, Revision 6, "Control of Quality Assurance Procedures and Instructions"
- CP-QAP-16.1, Revision 21, "Control of Nonconforming Items"
- QP-2.0 Revision 3, "General Quality Procedure"
- TUGCO office memorandum issued February 15, 1984, on "Revision 3 of Reporting Under 10 CFR 21"

The NRC inspector's review of procedures verified that the licensee had incorporated adequate instructions and information in the procedures to address the following areas:

- Method for evaluating deviations and informing the NRC and appropriate TUGCO organizations.
- Individual or organization responsible for reporting and evaluations.
- Controls to assure that each procurement document specifies provisions of 10 CFR Part 21, when applicable.
- Controls or procedures to assure maintenance of records.
- Controls or procedures to assure the preparation and appropriate disposition of deficiencies.
- Posting of requisite documents.
- Time frame for reporting deficiencies.
- Definition of reportable deficiencies.
- Procedure for reporting.
- Document control and reviews for resolution of deficiencies.

The NRC inspector verified that the licensee was posting documents as required by 10 CFR Part 21 by visiting 4 of the 12 official posting boards maintained by the licensee. At the posting boards visited, the NRC inspector observed that the required documents were posted, that pertinent information such as phone numbers was current, and that the posting board locations were in areas of personnel main traffic flow so that the information was available to workers at the facility. The NRC inspector also verified that documents referenced on the posting boards were available at the locations designated on the posting boards.

The NRC inspector reviewed two documents relating to identified nonconformances and two procurement documents to determine conformance to site procedures and the requirements of 10 CFR Part 21. Review of the nonconformance documents indicated that a notification, with all pertinent information, was forwarded to the licensee's organization designated to conduct 10 CFR Part 21 evaluations. Review of the procurement documents showed that the documents had been identified as being subject to the requirements of 10 CFR Part 21.

No violations or deviations were identified.

8. Inspection and Enforcement Bulletin (IEB) Followup

The NRC inspectors reviewed the licensee's file for each of the IEBs listed below and performed inspections as necessary to verify that the licensee had conducted an adequate review to determine if the IEB was applicable to the CPSES facility and to verify that the licensee had taken the required action on applicable IEBs.

IEB Number	Subject
80-20	Failure of Westinghouse Type W-2 Spring Return to Neutral Switches
84-02	Failure of General Electric Type HFA Relays in use in Class IE Safety Systems
83-04	Failure of the Undervoltage Trip Function of Reactor Trip Breakers
80-22	Automation Industries, 200-520-008 Sealed-Source Connectors

No violations or deviations were identified.

9. Battery Room Ventilation

On June 27, 1984, the NRC senior resident inspector for operations at CPSES identified a potential design problem in the Unit 1 and Unit 2 safety-related battery rooms. The potential problem exists because structural beams in the rooms create two large pockets (approximately 4' high, 6' wide and 21' long) in the overhead that are not directly swept by the ventilation system. These pockets could possibly allow a buildup of hydrogen emitted from the batteries. The NRC senior resident for operations had seen a similar problem while stationed at another nuclear power plant.

The NRC senior resident inspector for construction determined from discussions with cognizant licensee personnel that the battery room design was not considered a problem by the licensee because of the following reasons:

- The hydrogen generated by the batteries will diffuse in air and not stratify, therefore, no exhaust duct routing problem exists.

- Gibbs and Hill Calculation 315-4 shows that with a complete loss of ventilation exhaust the hydrogen concentration in the battery room would not reach hazardous conditions for a minimum of 6 days.

The NRC inspector discussed the above findings with a member of the NRC Fire Protection Analysis Team, and it was decided that this potential problem would be reviewed during a planned fire protection analysis inspection to be performed at CPSES. Pending the results of this review by the Fire Protection Analysis Team, this is an unresolved item. (445/8422-06; 446/8407-01)

10. Licensee's Investigation of Drug Use at CPSES

On June 29, 1984, licensee representatives met with NRC representatives at the NRC Region IV office in Arlington, Texas, and briefed them on activities related to an ongoing investigation of the use of drugs by individuals working on the CPSES project. Information related to the following events was imparted to the NRC representatives:

- The licensee has terminated a number of employees for suspected or confirmed involvement with drugs.

- The investigation was confined to the involvement with drugs by employees in job-related situations where it could possibly impact on their ability to do quality work.

- NCR M-84-01840 has been written by licensee personnel. This NCR states that the quality of any items inspected or reviewed by QA/QC personnel who have been terminated for a drug-related charge becomes indeterminate. The licensee is evaluating this NCR.

The licensee was implementing a program to identify all work done by the individuals suspected of involvement with drugs. Each item inspected by one of the QA/QC individuals is being reviewed, and a sample of each individual's inspections will be reinspected. Any item that received a subsequent inspection by another inspector will not be reinspected.

11. Plant Tours (Units 1 and 2)

At various times during the inspection period, the NRC inspector conducted general tours of the reactor building, fuel building, safeguards building, electrical and control building, and the turbine building. During the tours, the NRC inspector observed housekeeping practices, preventive maintenance on installed equipment, ongoing construction work, and discussed various subjects with personnel engaged in work activities. Selected NRC inspector findings are discussed below:

- On June 19, 1984, during a tour of the Unit 1 safeguards building, the NRC inspector observed that Electrical Penetrations 1E16, 1E18, 1E39, 1I62, 1E63, and 1E66 were depressurized (local gages at the penetrations read '0' psig). The NRC inspector determined from discussing the depressurized penetrations with the cognizant startup system engineer that operational control for the Unit 1 electrical penetration nitrogen pressurization system (System 51-05) had been turned over to TUGCO operations. The operational control of the system had been released from startup to operations in accordance with Startup Administrative Procedure CP-SAP-3, "Custody Transfer of Station Components," on March 21, 1983. The NRC inspector, on June 19, 1984, also observed that Annunciator 2.6 on Alarm Panel X-ALB-13 (located in the Unit 1 control room) was lit, thus, indicating a low nitrogen pressure condition for the Unit 1 electrical penetrations. The NRC inspector discussed this condition with the shift supervisor and determined that this alarm was not being logged and had not been responded to in accordance with Alarm Procedure X-ALB-13B. Alarm Procedure X-ALB-13B requires the following action when Annunciator 2.6 is in an alarm (lit) condition:

  Initial Operator Actions:

  1. Dispatch an operator to check N_2 supply:

     •Check bottle pressure

     •Check supply header pressure

  2. Check for penetration leak

Subsequent Operator Actions:

1. Isolate the affected cabinet

2. Check nitrogen system pressure

3. Check penetration for leakage

4. Contact the appropriate personnel to correct the problem

The licensee's failure to meet the requirements of Procedure X-ALB-13B is an apparent violation. (445/8422-01)

12. Unresolved Items

Unresolved items are matters about which more information is required in order to determine whether they are acceptable items, items of noncompliance, or deviations. Two unresolved items are identified in this report.

Paragraph	Item Number	Subject
6.a.(3)	(445/8422-04)	Material Certification for Penetration Seal Material
9	(445/8422-06; 446/8407-01)	Battery Room Ventilation

13. Exit Interviews

The NRC inspectors met with members of the TUEC staff (denoted in paragraph 1) at various times during the course of the inspection. The scope and findings of the inspection were discussed. The licensee acknowledged the findings.