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RELATED CORRESPONDENCE



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

August 17, 1984

Peter B. Bloch, Esq. Chairman  
Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dr. Walter H. Jordan  
Administrative Judge  
881 W. Outer Drive  
Oak Ridge, TN 37830

DOCKETED  
USNRC

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Dr. Kenneth A. McCollom  
Administrative Judge  
Dean, Division of Engineering,  
Architecture and Technology  
Oklahoma State University  
Stillwater, OK 74078

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

DOCKET NUMBER  
PROD. & UTIL. DIV. 58-445/446 OL

In the Matter of  
Texas Utilities Electric Company, et al.  
(Comanche Peak Steam Electric Station, Units 1 and 2)  
Docket Nos. 50-446 and 50-446

Dear Administrative Judges:

The NRC Staff ("Staff") has recently issued Inspection Reports 84-12/84-06 (July 23, 1984), 84-08/84-04 (July 26, 1984), 84-18 (July 26, 1984) and 84-20 (July 26, 1984). Inspection Report 84-12/84-06 discusses, inter alia, the status of resolution of previous inspection findings and 10 C.F.R. 50.55(e) reports. Inspection Report 84-08/84-04 addresses, inter alia, polar crane shim gaps, the status of resolution of 10 C.F.R. 50.55(e) reports, protective coatings, and training of protective coating personnel. Both Inspection Reports 84-18 and 84-20 concern the Applicants' disassembly, inspection, reassembly and testing of Transamerica Delaval, Incorporated ("TDI") emergency diesel generators. Copies of these inspection reports are enclosed for the information of the Board.

Sincerely,

*Geary S. Mizuno*  
Geary S. Mizuno  
Counsel for NRC Staff

Enclosures: As stated

cc w/o encl.: Remainder of Service List

8408280232 840817  
PDR ADOCK 05000445  
G PDR

D 507

7-23-84

In Reply Refer To:  
Docket: 50-445/84-12  
50-446/84-06

Texas Utilities Electric Company  
ATTN: M. D. Spence, President, TUGCO  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

Gentlemen:

This refers to the inspection conducted under the Resident Inspection Program by Mr. J. E. Cummins and others of this office during the period March 20, 1984, through May 18, 1984, of activities authorized by NRC Construction Permits CPPR-125 and CPPR-126 for the Comanche Peak facility, Units 1 and 2, and to the discussion of our findings with Mr. J. T. Merritt and other members of your staff at the conclusion of the inspection.

Areas examined during the inspection included plant status, action on previous findings, 10 CFR Part 50.55(e) report followup, allegation followup (Unit 1), Inspection and Enforcement Bulletin followup, preservice inspection (Unit 1), and plant tours. Within these areas, the inspection consisted of selected examination of procedures and representative records, interviews with personnel, and observations by the inspectors. The inspection findings are documented in the enclosed inspection report.

Within the scope of the inspection, no violations or deviations were identified.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room unless you notify this office, by telephone, within 10 days of the date of this letter, and submit written application to withhold information contained therein within 30 days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1).

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Texas Utilities Electric Company -2-

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

Sincerely,

Richard L. Bangart, Director  
Region IV Comanche Peak Task Force

Enclosure:

Appendix - NRC Inspection Report 50-445/84-12  
50-446/84-06

cc w/enclosure:

Texas Utilities Electric Company  
ATTN: H. C. Schmidt, Manager  
Nuclear Services  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

Texas Utilities Electric Company  
ATTN: B. R. Clements, Vice President, Nuclear  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-445/84-12  
50-446/84-06

Construction Permits: CPPR-126  
CPPR-127

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: March 20, 1984, through May 18, 1984

Inspectors D M Hunnicutt 6/21/84  
for J. E. Cummins, Senior Resident Inspector Date  
Construction (paragraphs 1, 2, 4, 7, 8, and 9)

for D M Hunnicutt 6/21/84  
W. M. McNeill, Reactor Inspector, Date  
Project Section A (paragraph 6)

for D M Hunnicutt 6/21/84  
D. P. Tomlinson, Senior Resident Inspector Date  
South Texas Project (paragraph 6)

D M Hunnicutt 6/21/84  
D. M. Hunnicutt, Team Leader, Region IV Date  
Task Force (paragraphs 1, 3, 4, 5, 7,  
and 9)



Inspection Summary

Inspection Conducted March 20, 1984, through May 18, 1984 (Report: 50-445/84-12)

Areas Inspected: Routine, announced inspection of plant status, licensee action on previous findings, 10 CFR 50.55(e) report followup, allegation followup, Inspection and Enforcement Bulletin followup, and plant tours. The inspection involved 170 inspector-hours onsite by four NRC inspectors.

Results: Within the six areas inspected, no violations or deviations were identified.

Inspection Summary

Inspection Conducted March 20, 1984, through May 18, 1984 (Report: 50-446/84-06)

Areas Inspected: Routine, announced inspection of plant status, licensee action on previous findings, 10 CFR 50.55(e) report followup, Inspection and Enforcement Bulletin followup, and plant tours. The inspection involved 26 inspector-hours onsite by two NRC inspectors.

Results: Within the five areas inspected, no violations or deviations were identified.

DETAILS SECTION

1. Persons Contacted

- \*J.T. Merritt, Assistant Project General Manager, Texas Utilities  
Generating Company (TUGCO)
- \*A. Vega, Site Quality Assurance Manager, TUGCO
- R. G. Tolson, Staff-Project Manager, TUGCO
- G. Purdy, Site QA Manager, Brown & Root (B&R)
- H. Hutchinson, Project Control Manager, B&R
- G. L. Morris, Site Mechanical Level III ASME Quality  
Engineer, B&R
- F. L. Powers, Electrical/Control Building Manager, TUGCO
- S. Spencer, QA Auditor (Corporate Office), TUGCO
- J. Marshall, Licensing Supervisor (Corporate Office), TUGCO
- M. Riggs, Operations Support Engineer, TUGCO
- T. Taylor, Engineer, Battelle Pacific Northwest Laboratories
- K. V. Cook, Research and Development Engineer, Oakridge  
National Laboratory
- J. Enriotto, Manager, Material Technology, Westinghouse
- D. Adaomis, Senior Engineer, Westinghouse
- R. Dacko, Licensing Engineer, TUGCO
- J. Keller, Field Engineer, TUGCO

The NRC inspectors also contacted other plant personnel including members of the construction, operations, technical, quality assurance, 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 the end of 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 indicates the status, as of April 27, 1984, of the 423 distinct areas identified by the licensee for turnover from construction to operations:

Total number of areas	423
Number of areas submitted to startup	226
Number of areas accepted by startup	199
Number of areas submitted to operations	116
Numbers of areas accepted by operations	82

The table below indicates the status, as of April 27, 1984, of the 332 distinct subsystems identified by the licensee for turnover from construction to operations:

Total number of subsystems	332
Number of subsystems submitted to startup	314
Number of subsystems accepted by startup	313
Number of subsystems submitted to operations	57
Number of subsystems accepted by operation	27

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

3. Licensee Action on Previous Inspection Findings

(Closed) Severity Level V Violation 445/8324-01 and 446/8315-01:  
Failure to Provide Adequate Procedures, Instructions, or Drawing for  
Installation of Major Items of Equipment

The NRC inspector reviewed the licensee's stated corrective actions by reviewing and evaluating the following licensee procedures:

- QI-QAP 11.1-39, "Mechanical Equipment Installation Inspection", Rev. 0, dated February 2, 1983
- CP-QAP-12.1, "Inspection Criteria and Documentation Requirements Prior to System N-5 Certification," Rev. 8, dated August 3, 1983

The NRC inspector's review determined that the specification and the construction installation procedures for mechanical equipment installation were revised by requiring that the engineer specify the requirement for

safety-related mechanical equipment. A reinspection program has been instituted to verify mounting details on safety-related mechanical equipment by requiring an additional step in the inspection walkdown and maintaining an appropriate checklist. Licensee has completed reinspection, walked down systems, and checked "as built" conditions. The Master Data Base is up to date.

The NRC inspector verified that the licensee's corrective actions as stated in their response dated June 28, 1983, have been adequately implemented.

(Closed) Severity Level V Violation 445/8324-02 and 446/8315-02: Failure to Provide Adequate Maintenance of Materials and Equipment in Outdoor Warehouse Areas

The NRC inspector reviewed the licensee's stated corrective actions by reviewing and evaluating the following licensee procedures:

- QI-QAP-11.1-26, "ASME Pipe Fabrication and Installation Inspections," Rev. 11, dated March 18, 1983
- QI-QAP-11-28, "Installation Inspections of ASME Component Supports, Class 1, 2 and 3," Rev. 8, dated January 15, 1982
- QI-QAP-11.1-28A, "Installation Inspections of ASME Class 1, 2, and 3 'Snubbers'," Rev. 2, dated April 28, 1983
- CP-QAP-16.1, "Control of Nonconforming Items"
- QI-QAP-2.1-5, "Training and Certification of Mechanical Inspection Personnel"

The NRC inspector determined that QC inspection instructions have been revised to specifically address the verification of material conditions of items prior to installation and that storage conditions preclude deterioration of materials and equipment. Outside storage is monitored on a periodic basis by QA to determine the adequacy of storage and a preservation program has been established to clean, preserve, and/or paint any items showing signs of dirt or corrosion. The licensee has prepared a standard warehouse procedure that addresses storage requirements and conditions.

The NRC inspector verified that the licensee's corrective actions as stated in their response dated June 28, 1983, have been adequately implemented.

(Closed) Unresolved Item (445/8214-02): Review of Licensee's Method of Inspection of Skewed Welds, Dated November 8, 1982

An allegation that the licensee's QC inspection procedure for welding did not contain written instructions for examining skewed fillet welds was reviewed. (NOTE: Skewed welds are defined as those welds joining two structural members that are not in the same plane and are not perpendicular



to each other. A typical example is two members jointed at an angle of 45 degrees with a weld at the joint toe of 135 degrees and another weld at the heel at a 45 degrees angle).

The NRC inspector completed a detailed review and evaluation of four procedures and the results of the licensee's reinspection efforts for skewed fillet welds. Procedures reviewed are listed below:

- QI-QAP-11.1-26, Revision 15, "ASME Pipe Fabrication and Installation Inspections and Requirements Prior to System/Subsystem N-5 Certification"
- QI-QAP-11.1-28, Revision 24, "Fabrication and Installation Inspection of Safety Class Component Supports"
- QI-QAP-11.21-1, Revision 6, "Requirements for Visual Weld Inspection"
- CP-QAP-16.1, Revision 20, "Control of Nonconforming Items"

The NRC inspector reviewed licensee/contractor records for 27 of the 640 supports with skewed fillet welds. The records were reviewed primarily for final as-built configuration and the results of the licensee's reinspection effort. The licensee originally committed to a reinspection of randomly selected skewed fillet welds with selection based upon statistical sampling techniques (reference: Inspection Report 50-445/82-14, paragraph 4). However, the licensee performed a 100% reinspection of the 640 affected supports with skewed fillet welds, rather than a randomly selected statistical technique. The NRC inspectors reviewed the licensee's drawings to determine the extent of inspection requirements for supports with skewed fillet welds. The NRC inspector's review and evaluation determined that the licensee's reinspection did not identify any skewed fillet welds that were undersized or otherwise did not meet appropriate requirements. No nonconformance reports (NCRs) were issued by the licensee or contractor during or as a result of the reinspection effort.

The NRC inspector performed visual inspection of the following Unit 1 supports and found no undersized skewed fillet welds:

RC-1-099-001-C86R	RC-1-101-002-C86K
RC-1-115-020-C66A	RC-1-115-025-C66K
DD-1-109-035-C46R	VD-1-148-001-C46R
SF-1-022-005-C46R	SF-X-135-700-A35R
CA-1-028-021-C46R	CH-1-005-005-C86R

No violations or deviations were identified.

(Closed) Severity Level IV Violation 445/8324-03 and 446/8315-03:  
Failure to Remove Obsolete Drawings from Construction Work Areas



The NRC inspector reviewed the improved process for reproducing drawings and determined that the new process results in an improved drawing, both in quality and legibility. The drawings reviewed are current and no out-of-date drawings were located in the work areas. The licensee's "Satellite" system for Unit 1 is complete and operational. This system is composed of four separate "Satellite" areas. The licensee is approximately 98% complete on a fifth "Satellite" area that is designated for Unit 2. From this review, the NRC inspector concluded that the four "Satellite" areas meet FSAR Section 17, paragraph 17.1.6 and B&R Procedure DCP-3, "CPSES Document Control Program," requirements.

The NRC inspector verified that the licensee's corrective actions as stated in their response dated June 28, 1983, have been adequately implemented.

4. 10 CFR 50.55(e) Report Followup and Evaluation

The NRC inspectors conducted a review of 26 licensee reported potential 10 CFR Part 50.55(e) packages. Of these 26 reports, 10 were found to not require a report (nonreportable) and the other 16 required the licensee to submit a report in accordance with 10 CFR Part 50.55(e) requirements. The licensee refers to 10 CFR 50.55(e) reports as "Significant Deficiency Analysis Reports" (SDARs). The licensee's SDARs were reviewed for content, compliance with NRC requirements for reporting, corrective actions, appropriate evaluation, timeliness of reporting, and completion of documentation. The following 26 CFR Part 50.55(e) reports (SDARs) and related licensee documentation were reviewed by the NRC inspectors, were found to meet the requirements, and were closed:

<u>50.55(e)</u> <u>or</u> <u>SDAR</u>	<u>Subject</u>	<u>Licensee Evaluation</u> <u>Reportable (R) or</u> <u>Not Reportable (NR)</u>	<u>Date</u> <u>Closed</u>	<u>Licensee</u> <u>Letter</u> <u>Number</u>
CP-81-01	Cellicote 658-N Epoxy Testing and Calculations for "Compressive Strength of Epoxy Grout"	NR	2/17/81	TXX3279
CP-82-A	Installed Borg Warner Valves (Containment Spray Valves)	R	3/18/82	TXX3495
CP-82-02	Design of Horizontal Fire Dampers	R	5/28/82	TXX3523
CP-82-06	Unit 2 Emergency Diesel (EDG) Generator Auxiliary Skid	R	1/10/84	TXX4095

<u>50.55(e) or SDAR</u>	<u>Subject</u>	<u>Licensee Evaluation Reportable (R) or Not Reportable (NR)</u>	<u>Date Closed</u>	<u>Licensee Letter Number</u>
CP-82-15	Defective Piston Skirt Castings for Unit 2 EDG	R	1/30/84	TXX4101
CP-83-01	Borg Warner Valves (check valves - disengaged parts)	R	9/7/83	TXX4043
CP-83-10	Letdown Heat Exchanger Anchors (mounting configuration)	R	7/7/83	TXX4001
CP-83-15	Cable Tray Clamps (mild steel bolting acceptable)	R	7/12/83	TXX4005
CP-83-17	Inadequate Overpressure Protection for Spent Fuel Pool Cooling Hx Components Cooling Water (relief valves incorrectly set)	R	8/9/83	TXX4023
CP-79-09	Installation of Major Conduit Supports Without Benefit of an Approved Instruction, Procedure or Drawing	R	8/6/80	TXX3173
CP-83-18	Containment Building Cooling (neutron detector well Reactor Cavity Cooling System)	R	9/26/83	TXX4054
CP-83-21	Transmitter Calibrations (excessive errors due to calibration techniques corrected)	R	12/28/83	TXX4091
CP-83-04	Potential Defect of Radiation Monitoring System	NR	2/28/83	TXX3635
CP-83-06	Vendor Installed HVAC System	R	7/29/83	TXX4016
CP-83-07	New Fuel Storage Racks	R	5/31/83	TXX3677

<u>50.55(e)</u> or <u>SDAR</u>	<u>Subject</u>	<u>Licensee Evaluation</u> <u>Reportable (R) or</u> <u>Not Reportable (NR)</u>	<u>Date</u> <u>Closed</u>	<u>Licensee</u> <u>Letter</u> <u>Number</u>
CP-83-08	Control Valve Brackets Unqualified Valve Attachments	R	4/21/83	TXX3657
CP-83-12	Class 1 Material Deficiencies (NDE specified was not performed)	NR	6/21/83	TXX3691
CP-83-13	Strut Jamming Devices (jam nuts on rigid struts)	NR	6/21/83	TXX36692
CP-83-14	(W) Loop Power Supply (NLP) Printed Circuit Cards - no cards of type with defects found at CP	NR	6/21/83	TXX3693
CP-83-16	Welded Attachments to Piping After Hydrostatic Testing	NR	7/20/83	TXX4012
CP-83-19	Service Water System Valves (safety function not adversely affected)	NR	10/17/83	TXX4064
CP-83-22	Chlorine Detection and Control Room HVAC (not per NRC Regulation and FSAR)	R	1/18/84	TXX4098
CP-84-07	Deficient Lug Crimping	R	3/29/84	TXX4139
CP-82-05	Concrete Void in Unit 1 Steam Generator Compart- ment #2 Exterior Wall	R	8/24/82	TXX3561
CP-82-01	Material Procured by AFCO Steel	NR	2/19/82	TXX3480
CP-82-08	Defective Limitorque Pinion Keys	NR	10/12/82	TXX3580

The above 10 CFR Part 50.55(e) reports are closed.

No violations or deviations were identified.

Selected NRC inspector observations of licensee reported items (10 CFR Part 50.55(e)) that the licensee is presently investigating or performing corrective action on are discussed below:

a. Rodent Damage to Class 1E Electrical and Control Cables

The licensee verbally reported damage to electrical and control cables between the Service Water Intake Structure (SWIS) and the safeguards building to the NRC and subsequently documented the information in SDAR CR-84-10.

The NRC inspectors observed portions of the licensee's inspection, corrective actions, and repulling of repaired cables or replacement of electrical and control cables at the SWIS and manholes MH 1A1 and MH 1A2 locations. The licensee removed all 28 cables (24 control cables and 4 instrumentation cables) in the Orange (A) Train. The licensee found considerable rodent damage to the insulation on several of these Instrument and Control (I&C) cables, and replaced each of the 28 I&C cables with new cable. The licensee pulled each of the nine 480V AC electrical cables out of the conduit and raceways; visual inspection identified some minor surface damage caused by rodents on two of these cables. The licensee repaired each surface damaged area and returned the cables to their original locations. The licensee performed visual inspections, meggered each of the 3 cables for the 6.9KV AC circuit, performed high voltage (hi-pot) testing on each cable, and determined that the 6.9KV circuit was satisfactory.

Licensee and NRC inspectors determined that the major rodent damage occurred near the junction of conduit C-130 01711 and junction box JBIM-2070 and between manhole E1A2 and E1A1 and safeguard cable A4009242A. Inspections of junction box JBIM-2060 and conduits C-12005538, C-1205539, and C-12001693 in the SWIS were also performed by the licensee and NRC inspectors.

The licensee issued the following NCRs as a result of the rodent damage to electrical and control cables in the Orange (A) Train:

E-84-00954, Rev. 3  
E-84-00962, Rev. 1  
E-84-00974, Rev. 2  
E-84-00975, Rev. 1  
E-84-01309, Rev. 0

Prior to reinstallation of the cables, each conduit was cleaned and no evidence of rodents was found. The licensee has completed replacement, repairs, repulling, and testing of the above cables. The licensee included the following preventive measures to assure the integrity of the cables:

- (1) All areas adjacent to manholes were baited with rat poison.
- (2) All conduit openings in the manholes are covered with temporary protective covering to preclude rodent entry. Permanent coverings are to be installed as specified in Design Change Authorization (DCA) 20397.
- (3) All conduit openings at the entrance or exit of the ductwork have been sealed with elastomer caulk or firestop foam.

The licensee investigated the Green (B) Train cables between the SWIS and the safeguards building to assure that the integrity of this train could be verified. The licensee personnel pulled oversized cloth swabs through each conduit. The NRC inspectors observed portions of this swabbing from both the SWIS and the manhole entrances. Possible rodent entry was identified in one conduit. The licensee removed the 28 (24 control and 4 instrumentation) cables from the ductwork as required by NCR E-84-01434.

The licensee inspected these cables and determined that two active cables and one spare cable had sustained minor damage. The licensee repaired the minor damage. The NRC inspectors observed portions of the inspection and repair in the Green (B) Train. The licensee reinstalled the 28 cables and initiated the preventive measures stated above for the Orange (A) Train.

No violations or deviations were identified.

b. Thermo-lag Installation

On May 2, 1984, the licensee verbally reported to the NRC, that contrary to CPSES construction procedures, construction debris in the form of scraps of thermo-lag material was found lying loose in electrical cable trays. The licensee subsequently documented this incident in SDAR CP-84-11. Prefabricated sections of thermo-lag material are being installed around electrical cable trays for fire protection. The strips of thermo-lag material had apparently been placed inside the cable trays to support the prefabricated sections of thermo-lag that were installed over the cable trays. When the problem was discovered, the licensee stopped the installation of the thermo-lag and evaluated the problem. The licensee's corrective action included the retraining of individuals involved in the installation of thermo-lag, the reinspection of cable trays 24 inches wide and larger that had already had the thermo-lag installed, and additional quality control inspection of cable trays immediately prior to sealing the prefabricated sections of thermo-lag.

No violation or deviations were identified.



5. Followup of Allegation Concerning Bolts for Steam Generator  
(SG) Upper Lateral Supports

An allegation was received in the Region IV office that some bolts holding the SG lateral supports to the wall plates had been cut off and, therefore, were incapable of securing the SG lateral supports to the imbedment plates in accordance with design requirements.

A review by the NRC inspector of the materials, drawings, specification, purchase orders, travellers, material received records, and related records documents indicated that the licensee purchased 144 A540GT B23 Class 4 2-1/2-inch diameter bolts 9 inches in length. The licensee purchased these 144 bolts 1-1/2 inches too long and then cut each of these bolts to 7-1/2-inch length to meet delivery and scheduling requirements. The rework (cutting 1-1/2 inches off the 9-inch length of each bolt) was authorized by the licensee and is documented in work package MRB-0550-013-RB.

The licensee did cut 1-1/2 inches off each bolt; therefore, in substance, this allegation was substantiated. However, there is no technical merit nor safety concern related to cutting 1-1/2 inches off the length of each bolt.

The original design required hex head bolts 7-1/2 inches in length and 2-1/2 inches in diameter.

The NRC inspector reviewed the following documents related to the above information:

- G&H Drawing 2323-17, Rev. 1
- AFCO Steel Drawing 303
- Purchase Order (PO) 35-1195-14915 C07
- Material Received Records (MPR) 060860, 61000, and 61150
- Material Test Reports (MTRs) for Charpy Impact, Tensile Strength, Chemical Analysis, Heat Treatment, and Magnaflux Testing
- Receiving Inspection Reports (RIR) 6008, 6256, and 6428

No violations or deviations were identified.

6. Preservice Inspection - Unit 1

A previous NRC inspection (50-445/82-19) reported witnessing of preservice ultrasonic inspection of Unit 1's reactor coolant system piping. It was noted in the above report that: (1) adequate penetration of the longitudinal wave was not achieved as evidenced by the sporadic loss of back reflection and (2) a full-volumetric examination was not achieved as evidenced by the saturation of the cathode ray display screen such that

indications in the outer half of the pipe thickness could not be identified by the refracted longitudinal wave. A demonstration by Westinghouse was requested by the NRC Division of Licensing based on recently reported successful ultrasonic inspections at the Callaway and Wolf Creek sites. The demonstration was requested to establish if these improvements in the ultrasonic testing instrumentation could result in a successful ultrasonic inspection at CPSES, Unit 1.

On March 20 and 21, 1984, the confirmatory demonstration ultrasonic inspection was performed at CPSES, Unit 1 by Westinghouse. The demonstration was witnessed by NRC inspectors and their consultants (Oak Ridge and Pacific Northwest Labs). The inspection was performed by Westinghouse Level II and III personnel (qualified to SNT-TC-1A) to Procedure ISI-206, Revision 0, "Manual Ultrasonic Examination of Welds." The demonstration included a longitudinal wave and a refracted (41 degrees) longitudinal wave of weld joint numbered 13 on Isometric Drawing TBX-1-4200 of Unit 1 and several weld joints; i.e., 27 and 29 of Unit 2.

The demonstration confirmed the previous NRC observations in regard to Unit 1. On weld number 13, only a sporadic back reflection could be achieved from the longitudinal wave. With the refracted longitudinal wave, considerable saturation was observed, approximately one-half the material thickness. On Unit 2, a consistent back reflection from the longitudinal wave was observed which indicated adequate penetration. After searching for a counter bore on the inside diameter of four different joints, one joint was found which consistently showed the counterbore by the refracted longitudinal wave. The saturation of the screen was less however, about 1/4 of the thickness near the outside diameter still could not be inspected. It was noted that the procedure, equipment, and some of the personnel were the same as previously used in the 1982 preservice inspection.

The differences found between Units 1 and 2 could be accounted for by the observed differences in surface finish condition and preservice inspection weld preparation. The chemical composition of the heats, grain size, and other geometrical factors could not be visually determined, but could have been significant contributors to the ultrasonic differences observed during the demonstration.

#### 7. Plant Tours

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.

No violations or deviations were identified.

8. Inspection and Enforcement Bulletin (IEB) Followup

The NRC inspector reviewed the licensee's IEB files for selected IEBs to verify that the licensee had conducted an adequate review of each IEB to determine its applicability to the CPSES facility and that the licensee had taken appropriate action when the IEB was applicable. Through discussions with licensee representatives and reviewing records, the NRC inspector was able to determine that the licensee had satisfactorily responded to the IEBs listed below. These IEBs are closed.

<u>IEB No.</u>	<u>Title</u>	<u>Licensee Closure Letter No./Date</u>
78-05	Malfunctions of Circuit Breaker Auxiliary Contact Mechanism Model CR 105X	TXX2908/11-16-78
78-06	Defective Cutler Hammer, Type M Relays with DC Coils	TXX2959/02-19-79 TXX2869/08-04-78
78-10	Bergen-Patterson Hydraulic Shock Suppressor Accumulator Spring Coils	TXX2894/10-19-78
79-03 and 79-03A	Longitudinal Weld Defects in ASME SA-312 Type 30455 Pipe Spools Mfg. by Youngstown Welding and Engineering Co.	TXX2983/05-01-79 TXX3204/10-07-80
79-04	Incorrect Weights for Swing Check Valves Manufactured by Velan Engineering Co.	TXX3000/06-14-79 TXX2989/05-23-79
79-09	Failures of G.E. Type AK-2 Circuit Breakers in Safety-Related Systems	TXX2988/05-22-79
79-11	Faulty Overcurrent Trip Device in Circuit Breakers for Engineered Safety Systems	TXX3013/07-16-79
79-23	Potential Failure of Emergency DG Field Exciter Transformer	TXX3056/10-17-79
79-25	Failures of Westinghouse BFD Relays in Safety Related Systems	TXX3191/09-08-80

<u>IEB No.</u>	<u>Title</u>	<u>Licensee Closure Letter No./Date</u>
80-16	Potential Misapplication of Rosemount, Inc. Models 1151 and 1152 Pressure Transmitters with "A" or "D" Output Codes	TXX3172/08-08-80
80-21	Valve Yokes Supplied by Malcolm Foundry Co., Inc.	TXX3250/12-22-80
80-23	Failures of Solenoid Valves Manufactured by Valcor Engineering Corp.	TXX3246/12-17-80
80-19	Failures of Mercury-Wetted Matrix Relays in Reactor Protective Systems of Operating Nuclear Power Plants Designed by CE	TXX3189/09-08-80
80-04	Deficiencies in Primary Containment Electrical Penetration Assemblies	TXX36687/06-14-83

NRC inspector observations of activities related to IEB 82-04 are discussed below:

IEB 82-04 licensee action item 1.a required the licensee to inspect all supplier provided electrical penetration terminal boxes and verify that the conductor terminations were satisfactory. The licensee determined that there were 4 supplier provided penetrations (IEB0, IEB1, 2EB0, and 2EB1) with attached terminal boxes involved each with 8 terminations for a total of 32 terminations. Due to the small number of terminations involved, the licensee replaced all 32 lugs in these boxes which had previously been terminated by the supplier.

IEB 82-04 licensee action item 1.b required the licensee to inspect electrical penetration conductors as they enter and exit penetration modules and verify the integrity of the insulation around the conductors. The licensee inspected all of the accessible conductors on safety-related penetrations for Units 1 and 2. At the time of the licensee's inspection, the Unit 2 safety-related penetrations were stored in a warehouse and the Unit 1 safety-related penetrations were installed in the plant. The licensee's inspection included all of the Unit 2



safety-related penetration conductors and all of the Unit 1 safety-related penetration conductors where these penetration conductors enter/exit the penetration modules on the reactor building end of the penetrations. The licensee's inspection verified the integrity of the insulation around the conductors. The Unit 1 penetration conductors on the end of the penetration located outside of the reactor building were not accessible. The licensee's inspections were documented by quality control personnel.

IEB 82-04 licensee action item 1.c required the licensee to conduct detailed examinations of all supplier-provided in-line butt splices having a wire size of #2 AWG and smaller, and to ascertain acceptability of these connections. The licensee inspected a random sample of the vendor provided in-line butt splices. The sample size was a minimum of 25% of the total number of vendor supplied in-line butt splices for each size conductor. In addition to the inspection of butt splices, the licensee selected a 10% random sample of the in-line butt splices, inspected and performed a pull test on them. The in-line butt splices for all wire sizes except #2 AWG passed the pull test. Due to the failure of the #2 AWG conductor in-line butt splices to pass the pull test, the licensee is replacing all #2 AWG in-line butt splices on safety-related penetrations.

The NRC inspector performed the following inspection activities to verify that the licensee's response and corrective action fulfilled the requirements of IEB 82-04:

- a. Reviewed the licensee's sample size and found that it met or exceeded the minimum required by Section 2.b of IEB 82-04.
- b. Reviewed licensee's documentation and connector vendor (Amp Incorporated) catalogs.
- c. Inspected a random sample of licensee installed connectors and verified that the connectors were installed properly. The connectors and crimping tool were as specified by the connector vendor. The crimping tool was calibrated (the calibration included the performance of a pull test on a similarly installed sample connection).
- d. Inspected the conductor insulation of a random sample of conductors at the point where the conductors exited/entered the epoxy of the penetration feed thru modules.

Selected portions of the accessible conductors on the safety-related penetrations listed below were inspected:

- Unit 1 (penetrations installed) IE6, IE9, IE10, IE11, IE12, IE13, IE15, IE16, IE17, IE47, IE39, IE56, IE60, IE64, IE62, AND IE63.



- Unit 2 (penetrations stored in warehouse) 2E12, 2E13, 2E18, 2E40, 2E56, 2E57, 2E58, 2E59, 2E62, 2E64, 2E76, 2E77, 2E78, 2E79, 2E80, AND 2E81.

Selected NRC inspector findings are discussed below:

- a. In attachment 2 to enclosure 1 of licensee's response letter TXX-3687 dated June 14, 1983, the licensee incorrectly listed penetrations 2E78 and 2E79 as the penetrations inspected for #12 AWG conductors. The penetrations actually inspected were 2E76 and 2E77 and the licensee's documentation confirm these inspections.
- b. During the manufacturing process, a piece of sleeving was placed over some of the conductors on the section of conductor that is embedded in epoxy. This sleeving extends approximately 2" on either side of the epoxy. This sleeving in some cases is cracked at the juncture of the sleeving and the epoxy. The conductor insulation inside the sleeving was intact in all except one instance observed by the NRC inspector. This instance was on conductor E3 of penetration IE10. This conductor had insulation damage; however, this damaged conductor had been identified by the licensee, and the licensee had issued revision 4 to sheet 10A of drawing 2323-EI-0511 which classified this lead and two adjacent leads as damaged.
- c. During the licensee's inspection of the in-line butt splices, the licensee found that the vendor had failed to crimp one end of a splicing lug on lead E6 of penetration 2E-58. This condition was documented on licensee's traveler No. EE83-0136-9301 and corrective action (splicing lug to be replaced) delineated on nonconformance report E83-00424. This failure of the vendor to crimp the lug was not interpreted by the cognizant licensee representative as being an under crimped condition and, therefore, this instance was not identified in the licensee's response to IEB 82-04. The licensee inspected 424 conductor splices and this is the only crimp that was identified as not being made. The Unit 1 penetrations are installed with most of the related work being completed on them. The NRC inspector did not find any evidence of conductor deterioration or damages that would make the integrity of the Unit 1 penetrations questionable.

The licensee is still performing work on the Unit 2 penetrations. Some of the work being performed is restoration from the inspection, testing, and corrective action related to IEB 82-04. The NRC inspector will monitor selected portions of this work and also the installation of these penetrations.

9. 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 NRC inspectors' statements.

7-26-84

In Reply Refer To:  
Dockets: 50-445/84-08  
50-446/84-04

Texas Utilities Electric Company  
ATTN: M. D. Spence, President, TUGCO  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

Gentlemen:

This refers to the inspection conducted under the Resident Inspection Program by Messrs. J. E. Cummins, W. F. Smith, L. E. Martin and C. R. Oberg of this office during the period November 14, 1983, through March 31, 1984, of activities authorized by NRC Construction Permits CPPR-126 and CPPR-127 of the Comanche Peak facility, Units 1 and 2, and to the discussion of our findings with Mr. J. T. Merritt, and other members of your staff at the conclusion of the inspection.

Areas examined during the inspection included licensee action on previous findings, 10 CFR Part 50.55(e) report followup, 10 CFR Part 21 report followup, allegation followup (Unit 1), independent inspection of coatings, training of protective coatings inspectors, review of safety-related systems (Unit 1), inventory of audit material in custody of NRC, and plant tours. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with personnel, and observations by the inspectors. The inspection findings are documented in the enclosed inspection report.

During this inspection, it was found that certain of your activities were in violation of NRC requirements. Consequently, you are required to respond to this violation in writing, in accordance with the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Your response should be based on the specifics contained in the Notice of Violation enclosed with this letter.

During this inspection, it was found that certain of your activities appeared to deviate from a commitment made to the NRC. This item and reference to the commitment are identified in the enclosed Notice of Deviation. You are requested to respond to this deviation in writing. Your response should be based on the specifics contained in the Notice of Deviation enclosed with this letter.

Texas Utilities Electric  
Company

2

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosures will be placed in the NRC Public Document Room unless you notify this office, by telephone, within 10 days of the date of this letter, and submit written application to withhold information contained therein within 30 days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1).

The responses directed by this letter and the accompanying Notices are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96511.

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

Sincerely,

Original Signed By:  
Richard L. Bangart

Richard L. Bangart, Director  
Region IV Task Force

Enclosures:

1. Appendix A Notice of Violation
2. Appendix B Notice of Deviation
3. Appendix C NRC Inspection Report  
50-445/84-08  
50-446/84-04

cc w/encl:

Texas Utilities Electric Company  
ATTN: H. C. Schmidt, Manager  
Nuclear Services  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

Texas Utilities Electric Company  
ATTN: B. R. Clements, Vice President, Nuclear  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

APPENDIX A

NOTICE OF VIOLATION

Texas Utilities Electric Company  
Comanche Peak Steam Electric  
Station (CPSES) Unit 1

Docket: 50-445/84-08  
Construction Permit: CFP-126

Based on the results of an NRC inspection conducted during the period of November 14, 1983, through March 31, 1984, and in accordance with the NRC Enforcement Policy (10 CFR Part 2, Appendix C), 49 FR 8583, dated March 8, 1984, the following violations were identified:

A. Gaps on Unit 1 Polar Crane Bracket and Seismic Connections Exceed Design Requirements

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

Design change Authorization 9872 required that all gaps on the Unit 1 polar crane bracket and seismic connections greater than 1/16 inch be shimmed.

Contrary to the above on February 13, 1984, the NRC inspector reviewed the polar crane bracket and seismic connections listed below and observed that there were unshimmed gaps that exceeded 1/16 inch.

<u>Girder Number</u>	<u>Connection location on Girder (looking from inside containment)</u>	<u>Approximate Gap</u>
23	center	1/8"
23	right	1/8"
26	right	3/16"
20	center	5/32"
20	left	3/16"
19	right	3/16"
17	center	5/32"
16	right	1/8"

This is a Severity Level IV Violation (Supplement 11.D) (445/8408-01).

B. Failure to Perform Inspections of Installation Activities Related to Unit 1, Main Coolant System Crossover Leg Restraints

Criterion X of Appendix B to 10 CFR Part 50 requires that inspections of activities affecting quality shall be established and executed by or for the organizations performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity.



Texas Utilities Electric Company Quality Assurance Plan, in Section 10.0, requires that planned written inspection procedures be utilized.\* It further requires that inspection activities include the types of characteristics to be measured, the methods of examination, and the criteria.

Contrary to the above, it was determined that inspections were not made of the installations of the Unit 1 crossover leg restraints, nor were any documents requiring such an inspection issued. Specifically, the requirements for installation, as specified in Gibbs & Hill Drawing 2323-S1-0550, were not inspected and documented. The eight crossover restraints (2 per loop) are major components of the main coolant piping seismic restraints and support system.

This is a Severity Level IV Violation. (Supplement II.D) (445/8408-02)

Pursuant to the provisions of 10 CFR 2.201, Texas Utilities Electric Company is hereby required to submit to this office, within 30 days of the date of this Notice, a written statement or explanation in reply, including: (1) the corrective steps which have been taken and the results achieved; (2) corrective steps which will be taken to avoid further violations; and (3) the date when full compliance will be achieved. Consideration may be given to extending your response time for good cause shown.

Dated: July 26, 1984

APPENDIX B

NOTICE OF DEVIATION

Texas Utilities Electric Company  
Comanche Peak Steam Electric  
Station (CPSES) Unit 1

Docket: 50-445/84-08  
Construction Permit: CPPR-126

Based on the results of an NRC inspection conducted during the period of November 14, 1983, through March 31, 1984, and in accordance with the NRC enforcement Policy (10 CFR Part 2, Appendix C), 49 FR 8583, dated March 8, 1984, the following deviation was identified:

Deviation from Design Information for Installation of Seismic Category I/  
Seismic Category II Structural Steel for the Bolted Connections, Between  
the W16x40 and the Wall on Platform OP-11 in the Pressurizer Compartment.

1. CPSES FSAR Section 1A(B), on page 1A(B)-26, states, "The quality assurance program for design and construction at CPSES incorporates the intended objectives of ANSI N45.2.11." (Draft 2, Revision 2 - May 1973)

Contrary to the above, the licensee did not incorporate the intended objectives of ANSI N45.2.11 into the design of certain personnel access platforms at CPSES. A review of the design documentation, including Gibbs and Hill Drawing 2323-S1-0556, Revision 4, Design Change Authorization (DCA) 9764, Revision 3, and DCA 1090, indicated that the above platform was originally designed as nonsafety-related.

2. ANSI N45.2.11 (Draft 2, Revision 2 - May 1973), paragraph 3, requires that design input requirements be specified to the level of detail necessary to permit the design activity to be carried out in a correct manner and should include basic functions, loads, and physical interfaces. ANSI N45.2.11, paragraph 8, requires that design changes be subjected to design control measures commensurate with the above.

Contrary to the above, the design documentation was upgraded to Seismic Category II with the particular beams supporting safety-related instrument tubing for two channels of pressurizer level upgraded to Seismic Category I. DCA 1090 required that the bolted connections between the W16x40 and the wall be "hand tight only", but did not address any locking device or thread upset to prevent nut backoff.

3. AISC Manual for Steel Construction in the Specification for Design, Fabrication, and Erection of Structural Steel for Building in Section 1.23.5 addresses the need for tightening high strength bolted connections to prevent the nut from loosening and falling off.

In deviation from the above, DCA 9764 upgraded the platform to Category I and changeout of material, but did not change the connection requirements specified in DCA 1090.

This is a deviation (445/8408-03).

Texas Utilities Electric Company is hereby requested to submit to this office within 30 days of the date of this Notice of Deviation, a written statement or explanation in reply, including: (1) the corrective steps which have been taken and the results achieved; (2) corrective steps which will be taken to avoid further deviation from commitments made to the Commission; and (3) the date when full compliance will be achieved. Consideration may be given to extending your response time for good cause shown.

Dated: July 26, 1984

APPENDIX C

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-445/84-08  
50-446/84-04

Dockets: 50-445; 50-446

Construction Permits: CPPR-126  
CPPR-127

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

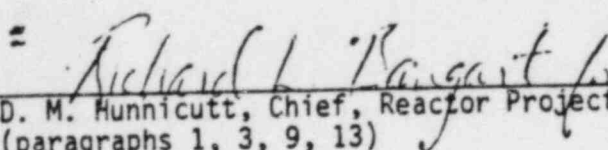
Inspection Conducted: November 14, 1983 through March 31, 1984

Inspectors: *L M Hunnicutt* 4/10/84  
for J. E. Cummins, Senior Resident Inspector-Construction  
(paragraphs 1, 2, 3, 5, 6, 7, 8, 9, 10, 13) Date

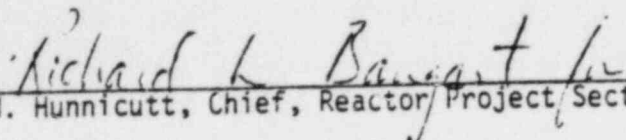
for *L M Hunnicutt* 4/10/84  
W. F. Smith, Resident Inspector-Operations  
(paragraphs 1, 4, 13) Date

*L. E. Martin* 4/10/84  
L. E. Martin, Reactor Inspector, Engineering Section  
(paragraphs 6, 11, 13) Date

*C. R. Oberg* 4/10/84  
C. R. Oberg, Reactor Inspector, Reactor Project Sec. A  
(paragraphs 1, 11, 13) Date

  
 \_\_\_\_\_  
 D. M. Hunnicutt, Chief, Reactor Project Section A  
 (paragraphs 1, 3, 9, 13)

2/26/84  
 Date

Approved:   
 \_\_\_\_\_  
 D. M. Hunnicutt, Chief, Reactor Project Section A

2/26/84  
 Date

Inspection Summary

Inspection Conducted November 14, 1983 through March 31, 1984 (Report 50-445/84-08)

Areas Inspected: Routine, announced inspection of licensee action on previous findings, 10 CFR Part 50.55(e) report followup, 10 CFR Part 21 followup, allegation followup, independent inspection of coatings, training of protective coatings inspectors, review of safety-related systems, inventory of audit material in custody of NRC, plant status, and plant tours.

The inspection involved 190 inspector-hours onsite by five NRC inspectors.

Results: Within the ten areas inspected, two violations (gaps on Unit 1 polar crane bracket and seismic connections exceed design requirements, paragraph 3 and failure to perform required inspections, paragraph 11) and one deviation (deviation from FSAR design requirement, paragraph 11) were identified.

Inspection Summary

Inspection Conducted November 14, 1983 through March 31, 1984 (Report 50-446/84-04)

Areas Inspected: Routine, announced inspection of licensee action on previous findings, 10 CFR Part 50.55(e) report followup, 10 CFR Part 21 report followup, independent inspection of coatings, training of protective coatings inspectors, inventory of audit material in custody of NRC, and plant tours.

The inspection involved 44 inspector-hours onsite by two NRC inspectors.

Results: Within the seven areas inspected, no violations or deviations were identified.



DETAILS1. Persons ContactedPrincipal Licensee and Contractor Employees

- \*B. R. Clements, Vice President, Nuclear Operations
- \*J. C. Kuykendall, Manager, Nuclear Operations
- \*J. T. Merritt, Site Project Manager
- \*R. A. Jones, Manager, Plant Operations
- \*T. L. Gosdin, TUGCO Public Information Coordinator
- \*R. T. Jenkins, Operations Support Superintendent
- \*M. McBay, Engineering Manager, TUGCO, Engineering and Construction (E&C)
- \*R. P. Baker, Staff Engineering Manager, TUGCO E&C
- \*R. G. Tolson, TUGCO Site QA Supervisor
- S. Spencer, QA Auditor (Corporate Office)
- J. Marshall, Licensing Supervisor (Corporate Office)
- \*D. E. Deviney, Operations QA Supervisor
- \*T. P. Miller, Lead Startup Engineer, TUGCO
- \*C. H. Welch, QA Services Supervisor
- \*H. A. Lancaster, Startup QA Specialist
- \*J. C. Smith, Operations QA
- \*M. Riggs, Operations Support Engineer
- B. C. Scott, QA Supervisor
- A. Vega, QA Services Supervisor
- R. Kissenger, Project Civil Engineer
- J. D. Hicks, Assistant Site QA Supervisor
- R. L. Moller, Westinghouse Site Project Manager
- G. Purdy, Site QA Manager Brown & Root (B&R)
- H. Hutchinson, Project Control Manager
- G. L. Morris, Site Mech. Level III ASME Quality Engr., B&R

The NRC inspectors also contacted other plant personnel including members of the construction, operations, technical, quality assurance, 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 July 1984. There is presently a great deal of effort to complete areas and then turn the completed areas over to Texas Utilities Generating Company (TUGCO) operations. The turnover process requires two phases. The first phase takes place when construction completes a specified area and turns that area over to the startup group. The second phase of the turnover process is when TUGCO operations completes final acceptance of the area from the startup group. The licensee has identified 422 distinct areas which are to be turned over. As of March 9, 1984, 158 of these 422 areas had been turned

over from construction to the startup group. TUGCO operations has made final acceptance of 66 of the 422 areas. The 422 distinct areas identified by the licensee to be turned over vary greatly in size and complexity; therefore, the number of areas turned over provides an indicator that progress is being made, but to make a determination as to the degree of progress, the size and complexity of each area must be evaluated.

Construction of Unit 2 is approximately 65% complete. Fuel loading is scheduled for January 1986.

### 3. Licensee Action on Previous Inspection Findings

- a. (Closed) Violation (445/82-11): Failure to Perform Inspections of Installation Activities Related to Unit 1 Containment Polar Crane.

The licensee's Nonconformance Report (NCR) M-82-00894 documents the above violation. The disposition of NCR M-82-00894 directed that the polar crane girder connection finger shims previously installed per DCA 9872 were to be removed and inspected and any deviations from the requirements of DCA 9872 were to be identified to engineering for resolution. The licensee removed and inspected all of the finger shims associated with the Unit 1 polar crane bracket and seismic connections. During this inspection, any shim that did not meet the design requirements of DCA 9872 was replaced. This included the replacement of ten finger shims that were found to have clipped fingers. Operational traveler CE-82-370-8104 was issued to accomplish and document the shim inspection and rework directed by NCR M-82-0094. Traveler CE-82-370-8104 also instructed that the new shims were to be installed per the requirements of DCA 9872.

The shim inspection and rework was inspected and documented by quality control (QC) inspectors on NCR M-82-00894. This NCR was closed on January 24, 1983. The quality control inspection of the shim rework satisfies the requirements which were previously not met and which resulted in the original violation. This item is closed. However, the NRC inspector performed a random inspection of the polar crane girder connection shims and had the following two concerns:

- (1) Design Change Authorization (DCA) 9872 required that all gaps greater than 1/16 inch be shimmed. In addition QC personnel verified that the gap for each polar crane girder connection was less than 1/16 inch and documented this on a shim documentation card which was attached to Traveler CE-82-370-8104. However, the NRC inspector observed that the following randomly selected girder connections had gaps that exceeded 1/16 inch:

<u>Girder Number</u>	<u>Connection Location on Girder (Looking from inside containment)</u>	<u>Approximate Gap</u>
23	center	1/8"
23	right	1/8"
26	right	3/16"
20	center	5/32"
20	left	3/16"
19	right	3/16"
17	center	5/32"
16	right	1/8"

This is an apparent violation (445/8408-01).

- (2) DCA 9872 required that the shims be tack welded as shown on Gibbs and Hill sketch SK82032 (Sheet 3 of DCA 9872). General Note 4 of SK82032 states that shims in the seismic connection may be welded to either vertical plate; however, on the seismic connections for girders 18, 22, 26, and 27 the tack welds which welded the shims together also tack welded the vertical plates together. This concern was discussed with licensee personnel. This is an unresolved item (445/8408-04).

- b. (Closed) Severity Level IV Violation 445/8323-02: Instructions.

The five jam nuts identified as being loose were reworked and verified by QC to be "snug tight." The inspection checklist of procedure CP-QAP-12.i was revised so that jam nut tightness is verified.

- c. (Closed) Unresolved Item 446/8309-01: NDE Level III Certification

The licensee inspector's NDE Level III certification was rewritten on May 27, 1983, to show that his certification was based, in part, on successful completion of examinations.

4. 10 CFR Part 50.55(e) Report Followup Inspection

The RRI (Operations) conducted a review of all reports made by the licensee pursuant to 10 CFR 50.55(e) since the CPSES construction permit was issued on December 19, 1974. During the period between December 19, 1974, and February 17, 1984 NRC reading files showed that 103 reports were transmitted to the Commission. TUGCO logs were in agreement. Of these, subsequent correspondence indicated that the licensee, upon further investigation, concluded that 57 reports did not meet the reporting criteria of 10 CFR 50.55(e) and thus were "not reportable."

The balance of 46 10 CFR 50.55(e) reports appear to be reportable except for three recent items, which were under investigation at the time of the inspection.

The RRI noted that 26 10 CFR 50.55(e) reports had been closed by the licensee. However, the status report published weekly by the site QA secretary indicated that they were awaiting NRC action for closure. The licensee's representatives stated that the item would be closed and removed from the weekly report as soon as the SRRI (Construction) reviewed the records submitted to him and specifically addressed each in an inspection report as satisfactorily closed. At the exit interview of March 2, 1984, the RRI pointed out that this is not a requirement of the NRC and as such the NRC should be removed from the status report as actionee for closure of each item. The records submitted to the SRRI (Construction) should be retrieved and placed in the appropriate licensee-controlled file, subject to future NRC audits. During the exit interview the licensee stated that this would be done.

The RRI reviewed eight of the 10 CFR 50.55(e) report folders in detail. The licensee refers to them as "Significant Deficiency Analysis Reports" (SDARs). Attributes evaluated included followup correspondence, depth of investigation, and compliance with reporting requirements. The eight folders were numbered SDAR 81-07, 82-03, 82-07, 82-09, 82-13, 82-14, 83-03, and 83-20. Half were ruled "non-reportable" by the licensee, and half were "reportable." The RRI did not observe any deficiencies in any of the folders.

In addition to reviewing specific SDAR records, the RRI reviewed the following applicable procedures:

CP-EP-16.3	"Control of Reportable Deficiencies"
DQP-CS-6	"Reporting of Significant Deficiencies"
CP-QP-16.1	"Significant Construction Deficiencies"
CP-QP-15.6	"SDAR Status Tracking"

The above procedures appear to meet the requirements of 10 CFR 50. The condition and tracking of each of the SDAR packages substantiate this. However, the RRI noted that the corporate office in Dallas, Texas, has one numbering system with their own log for SDAR's originated in the corporate office. The CPSES site QA office has another numbering system, with their own log, for SDAR's originated at the site. The corporate office tracks all SDAR's, but CPSES tracks only the SDAR's originated at the site. At the exit interview of March 2, 1984, the RRI commented that Site status report addressees could be led into believing the site tracking system is complete when such is not necessarily the case.

No violations or deviations were identified.



5. Followup of Part 21 Report

On February 3, 1984, a licensee audit of one of its suppliers, Gulfalloy, Inc., identified an apparent falsification of inspector's eye examination records. This apparent falsification of records was reported to the NRC by Gulfalloy, Inc., in accordance with the reporting requirements of 10 CFR Part 21. The falsification of eye exam records occurred when the eye exam records from an eye exam given to three inspectors on November 13, 1980, were photocopied and the date changed so that it would appear that the three inspectors had also received eye exams on October 22, 1981. Additional eye exams were given to the inspectors on September 15, 1982, and again on January 16, 1984. The Gulfalloy, Inc., employee responsible for ensuring that the inspectors received the required eye exam was also responsible for reviewing material manufacturers chemical and physical test results.

The NRC inspectors discussed this event with licensee personnel and were informed that corrective action would include a review of the records of material received from Gulfalloy, Inc. The NRC inspector will continue to monitor the licensee's corrective action.

No violations or deviations were identified.

6. Followup of Allegation

The following allegation was relayed from the NRC Region IV office to the NRC inspector for followup: "Fork lift ran into guide rods by missile shield. Rods were approximately 2½" diameter stainless steel." Representatives from the Office of Investigations interviewed the allexer in order to obtain more details regarding this allegation, but were unsuccessful in this effort.

The NRC inspector was unable to identify an event that fit all the specifics in the above allegation. As far as the NRC inspector could determine from discussions with personnel familiar with work in the reactor building, fork lifts have not been used in the reactor building. However, the following event could have been what was observed by the allexer:

On October 14, 1983, the refueling crane struck and bent a thermocouple column. This incident and subsequent corrective action were documented on Westinghouse Field Deficiency Report TBX-10285 and Brown and Root NCR M-11438. The thermocouple column that was bent is a long (approximately 17 feet) tube that provides support for incore thermocouple tubing between the upper core internals and the reactor vessel head. The lower end of the thermocouple column is attached to the upper core assembly.



The refueling crane is a bridge type crane that spans the refueling cavity. At the time the incident took place, the upper core assembly was mounted on extension legs and stored in its normal storage location in the refueling cavity. The extension legs elevated the upper end of the thermocouple column high enough to place it in the path of the refueling crane. The bent thermocouple was reported, evaluated, and straightened as reported in the two documents identified above. This allegation is closed.

No violations or deviations were identified.

7. Independent Inspection of Coatings

Brookhaven National Laboratories (BNL) has been contracted by the NRC to conduct an independent inspection of the CPSES protective coatings program and its implementation, and to investigate allegations of improprieties in the protective coatings area.

During this inspection period BNL inspectors performed three onsite inspections at CPSES.

The scope and findings of this ongoing inspection will be documented in a subsequent NRC report.

8. Training of Protective Coatings Inspectors

On March 8, 1984, the NRC inspector attended a training session given for protective coatings quality control inspectors. The purpose of the training session was to review and discuss recent changes to protective coatings Procedure QI-QP-11.4-26, "Inspection of Steel Substrate, Surface Preparation, Primer Application, Primer Repair Seal and Finish Coat Application and Repair". The lesson plan for the training session was followed and the attendees were allowed ample opportunity to discuss the topics covered.

No violations or deviations were identified.

9. Inventory of Audit Material in Custody of NRC

On March 9, 1984, the NRC inspector took custody of a box containing file folders from the site quality assurance supervisor. The box of file folders had been collected by licensee personnel during an audit of quality control inspectors conducted on March 8, 1984. An NRC representative subsequently made an inventory of the contents of this box.

10. Plant Tours

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, and ongoing construction work.

No violations or deviations were identified.

11. Review of Safety-Related Systems (Unit 1)

a. Platforms Inside Containment

On December 14, 1983, the NRC inspector observed loose bolted connections on platform OP-11 in the pressurizer compartment. Platform OP-11 supports safety-related instrument tubing for two channels of pressurizer level on the under side of the platform. A review of the design documentation including Gibbs & Hill Drawing 2323-S1-0556, Revision 4, DCA 9764, Revision 3, and DCA 1090 indicated that this platform was originally designed as nonsafety-related. It was upgraded to Seismic Category II with the particular beams in question being Seismic Category I as they were supporting safety-related instrument tubing for two channels of pressurizer level. DCA 1090 required that the bolts be "hand tight only" to allow for lateral expansion of the platform, but it did not address any locking device or thread upset to prevent nut backoff. DCA 9764 upgraded the platform to Category I and changeout of material but did not change the connection requirements specified in DCA 1090. Subsequent to identification of this problem by the NRC inspector, a DCA was initiated requiring the use of jam nuts or upset threads to correct this problem with the platforms shown on G&H Drawing 2323-S1-0556. The NRC inspector advised the licensee that DCA 1090 affected more than one drawing and that engineering would have to look at all similar connections for general application and corrective action.

This is a deviation (445/8408-03).

b. Main Coolant Loop Restraints

During an inspection inside containment, Unit 1, the crossover leg restraints of main coolant loop No. 1 were examined for conformance to applicable drawings for materials, construction, and installation. Materials and welding were found to be as specified on the drawings.

There are two similar restraints on each main coolant loop made of 1½ inch ASTM A36 carbon steel. The restraints were manufactured by AFCO Steel Corporation in accordance with G&H 0550,

Revision 4. The restraints are massive, approximately 11 feet long, 3 feet wide and 5½ feet tall. Each restraint is fastened to the base mat by 16 prepositioned 2½ inch diameter anchor bolts as specified on G&H drawing 2323-S1-0551, Detail B.

Drawing S1-0550 required that each anchor bolt be pretensioned to "90 plus or minus 10 kips" and utilize a washer, two regular nuts and a jam nut made of ASTM A 540 material. The bottom nut and the washer required a tack weld as noted in the drawing. The tack welds were not found on any of the anchor bolts inspected. In addition, no record of a QC installation inspection of the restraints for loop No. 1 or any other loop of Unit 1 could be found. Thus, pretensioning of the anchor bolts could not be confirmed.

The crossover leg restraints are major components of the main coolant piping seismic restraint and support system. Appendix B of 10 CFR 50, Criterion X, requires that inspections of activities affecting quality shall be established and performed to verify conformance with documented instructions, procedures, and drawings for accomplishing the activity.

TUEC QA Plan, Section 10.0 requires that planned written inspection procedures be used. No requirement for inspection of the crossover leg restraints had been issued. This is also contrary to 10 CFR 50, Appendix B, Criterion X.

This is a violation (445/8408-02).

#### 12. Unresolved Items

Unresolved items are matters about which more information is required in order to determine whether they are acceptable items, violations or deviations. One unresolved item related to polar crane shims (Unresolved Item 8408-04) is discussed in paragraph 3.

#### 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.

7-26-84

In Reply Refer To:  
Docket: 50-445/84-18

Texas Utilities Electric Company  
ATTN: M. D. Spence, President, TUGCO  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

Gentlemen:

This refers to the inspection conducted by Messrs. D. L. Kelley and W. F. Smith of this office during the period May 1-31, 1984, of activities authorized by NRC CPPR-126 for the Comanche Peak Facility, Unit 1 and to the discussion of our findings with Messrs. J. T. Merritt, J. C. Kuykendall, and other members of your staff at the conclusion of the inspection.

Areas examined during the inspection included: (1) preoperational test witnessing, (2) followup of Transamerica Delaval diesel generator inspection, and (3) plant tours. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with personnel, and observations by the inspectors. These findings are documented in the enclosed inspection report.

During this inspection, it was found that certain of your activities were in violation of NRC requirements. Consequently, you are required to respond to these violations in writing, in accordance with the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Your response should be based on the specifics contained in the Notice of Violation enclosed with this letter.

One new unresolved item is identified in paragraph 3 of the enclosed inspection report.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosures will be placed in the NRC Public Document Room unless you notify this office, by telephone, within 10 days of the date of this letter, and submit written application to withhold information contained therein within 30 days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1).

The response directed by this letter and the accompanying Notice is not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.



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

Sincerely,  
Richard L. Bangart

Richard L. Bangart, Director  
Region IV Comanche Peak Task Force

Enclosures:

1. Appendix A - Notice of Violation
2. Appendix B - NRC Inspection Report  
50-445/84-18

cc w/enclosures:

Texas Utilities Electric Company  
ATTN: H. C. Schmidt, Manager  
Nuclear Services  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

Texas Utilities Electric Company  
ATTN: B. R. Clements, Vice President, Nuclear  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201



APPENDIX A

NOTICE OF VIOLATION

Texas Utilities Electric Company  
Comanche Peak Steam Electric Station

Docket: 50-445  
Construction Permit: CPPR-126

Based on the results of an NRC inspection conducted during the period of May 1-31, 1984, and in accordance with the NRC Enforcement Policy (10 CFR Part 2, Appendix C), 49 FR-8583, dated March 8, 1984, the following violations were identified:

A. Failure to Follow Procedures

Criterion V of appendix B to 10 CFR 50 states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings..."

1. Contrary to the above, during performance of the "A" Train emergency diesel generator auxiliary systems retest, 1CP-PT-29-01, RT-1, it was noted that the test was being performed without all the prerequisites being signed off. This is a violation of CP-SAP-21, "Conduct of Testing."
2. Contrary to the above, it was noticed that "Hold Tags" were improperly removed from the "A" Train diesel engine, and the diesel had been run without closing several nonconformance reports, or affixing "conditional release" tags to the diesel, which is in violation of STA-405, R5, "Control of Nonconforming Materials."
3. Contrary to the above, an inspection report relating to implementation of the "A" Train emergency diesel generator Owners' Group inspection of the turbochargers (I.P.-33) contained notations that the dimensions specified could not be taken because "the needed equipment was not available." The letters "N/A" were put on the inspection report instead of revising the applicable inspection plan and the inspection report criteria. This is a violation of QPM-004, "Inspection Report."

This is a Severity Level IV Violation. (Supplement II-D) (445/8418-01)

B. Failure to Provide Adequate Test Prerequisites

Criterion XI of Appendix B to 10 CFR 50 states, in part, ". . . the test program shall include, as appropriate, proof tests prior to installation, preoperational tests, and operational tests during nuclear power plant or fuel reprocessing plant operation of structures, systems, and components. Test procedures shall include provisions for assuring that all prerequisites for the given test have been met . . . ."

Contrary to the above, during the performance of the safety injection pump performance retest, ICP-PT-57-01, RT-2, it was observed that one of the prerequisites specified a requirement for the system to be lined up in accordance with SOP-201A, which is the safety injection system operating procedure. This line up will not support the test. Therefore, the prerequisites were not adequate for performance of the test, because a special lineup (not specified) was necessary to support the test.

This is a Severity Level V Violation. (Supplement II-E) (445/8418-02)

Pursuant to the provisions of 10 CFR 2.201, Texas Utilities Electric Company is hereby required to submit to this office, within 30 days of the date of this Notice, a written statement or explanation in reply, including: (1) the corrective steps which have been taken and the results achieved; (2) corrective steps which will be taken to avoid further violations; and (3) the date when full compliance will be achieved. Consideration may be given to extending your response time for good cause shown.

Dated: July 26, 1984

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-445/84-18

Construction Permit: CPPR-126

Docket: 50-445

Category A2

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), Unit 1

Inspection At: Glen Rose, Texas

Inspection Conducted: May 1-31, 1984

Inspectors: D M Hunnicutt  
for D. L. Kelley, Senior Resident Reactor Inspector (SRRI)  
(paragraphs 1, 2, 4, and 6)

7/6/84  
Date

for D M Hunnicutt  
W. F. Smith, Resident Reactor Inspector (RRI)  
(paragraphs 1, 2, 3, 5, and 6)

7/6/84  
Date

Approved: D M Hunnicutt  
D. M. Hunnicutt, Team Leader, Region IV Task Force

7/6/84  
Date

Inspection Summary

Inspection Conducted: May 1-31, 1984 (Report 50-445/84-18)

Areas Inspected: Routine, announced inspection of (1) preoperational test witnessing, (2) Transamerica Delaval (TDI) diesel generator inspection, (3) plant tours; and (4) plant status. The inspection involved 150 inspector-hours onsite by two NRC inspectors.

Results: Within the four areas inspected, two violations were identified in two areas (failure to follow procedures (three examples in two areas), paragraphs 2 and 3 (8418-01) and failure to provide adequate test prerequisites (one example), paragraph 2 (8418-02)).

DETAILS

1. Persons Contacted

Licensee Personnel

- \*B. R. Clements, Vice President, Nuclear Operations
- \*J. C. Kuykendall, Manager, Nuclear Operations
- \*J. T. Merritt, Assistant Project General Manager
- \*J. H. Roberts, Construction Startup Turnover Surveillance Supervisor
- \*T. P. Miller, Lead Startup Engineer
- \*H. A. Lancaster, Startup Quality Assurance Specialist
- \*J. C. Smith, Quality Assurance
- \*T. L. Gosdin, Support Services Superintendent
- \*D. E. Deviney, Operations Quality Assurance Supervisor
- D. Reimer, Maintenance Engineer
- D. A. London, TDI Owners' Group Coordinator CPSES
- C. W. Smith, Mechanical Maintenance Supervisor
- D. Lystad, Maintenance Supervisor
- B. Snellgrove, Quality Control Inspector
- R. L. Fortenberry, Shift Supervisor
- M. Smith, Shift Supervisor
- M. Niemeyer, Training Supervisor
- \*J. Maxwell, Operations QC Supervisor
- \*R. A. Jones, Manager, Plant Operations
- M. Harris, Systems Test Engineer
- K. Becker, Systems Test Engineer
- K. Hemmila, Systems Test Engineer
- M. Blevins, Maintenance Superintendent
- C. Marquis, Maintenance Supervisor

Others

V. Lyndstrom, TDI Service Representative

The NRC inspectors also interviewed other licensee employees during this inspection period.

\*Denotes those present during the exit interview.

2. Preoperational Test Witnessing

During this reporting period, the NRC inspectors witnessed the performance of four preoperational tests. The specific test numbers, titles, test objectives, and inspection results are listed below.

Prior to witnessing of each test, the NRC inspectors performed a review of the test procedure. The review was conducted to verify that:

- The procedure provided a clear statement which specified the function it was to perform.
- The acceptance criteria were clearly stated and addressed the appropriate requirements.
- The communications between all persons concerned with the test were addressed.
- The procedure contained appropriate quality control hold points.
- There were provisions for verification of actions performed with appropriate sign offs provided for assurance of procedure step performance.
- The performance of the procedure would, when completed, assure that the acceptance criteria were met.
- The procedure was clearly written, properly reviewed and approved in accordance with the licensee's administrative procedures.

The NRC inspectors found that all the above items were adequately addressed.

The NRC inspectors then observed the licensee's performance of the following tests:

- a. 1CP-PT-29-01, RT-1, "Emergency Diesel Generator (EDG) Auxiliary Systems, Retest 1"

This test was to demonstrate the proper operation of the auxiliary systems components that receive safety injection signals, automatic lockout and blockout signals, or operator lockout signals. It also tests the fuel oil transfer pump control circuits. This is the first in a series of retests and preoperational test repeats that are to be accomplished subsequent to the EDG Owners' Group teardown and inspection.

On May 19, 1984, the RRI arrived at the test site (in the "A" Train diesel generator room) while the test was in progress. At the time, Section 7.19, "EDG Fuel Oil Transfer Pumps 01A and 01B Control Circuit Verification Test," was being delayed until additional communications equipment was obtained. Upon reviewing the official working copy of the procedure, the NRC inspector noted that the prerequisite electrical lineup sheet was not completed. Breakers 1EB3-4, 1G, and 2G, which supply power to EDG Starting Air Compressors 01 and 02, were not



signed off as being in the closed position. This is a requirement under prerequisite 6.1.7 in support of test paragraphs 7.1 and 7.2, which were signed off by the system test engineer (STE) as satisfactorily completed.

The RRI brought this to the attention of the STE. He acknowledged the error, secured the test, and proceeded to initiate a test deficiency report. The STE demonstrated to the NRC inspector how the breakers were initially closed as indicated by the lights on the control panel and the position indicator for the breakers on the distribution panel. If the supply breakers were not closed as required by prerequisite 6.1.7, the test results could be misleading, i.e., it would appear that the lockout signal functioned properly, because the air compressors would not start. The STE convinced the RRI that if the breakers had been out of position during the test, it would have been obvious by the indicating lights on the control panel. The test was resumed after the deficiency report was dispositioned by licensee management. This is in violation of Section 4.9.11 of CP-SAP-21, Revision 2, "Conduct of Testing," which requires the STE to ensure that the applicable prerequisites specified by the test procedure have been verified to be complete. Sign off of the electrical lineup sheet documents this verification.

b. 1CP-PT-57-01, RT-1, "Safety Injection Pump Performance, Retest 1"

The objective of this test was to verify operation of control and interlock circuits for various components in the safety injection system. The retest was required as a result of electrical rework for train separation criteria and walkdown deficiencies. The test was started on May 16, 1984. The NRC inspector noted that there were some editorial errors in the original revision of the test procedure. Upon questioning the STE, it was noted that he had conducted a pre-test briefing of personnel and reviewed the test procedure to the extent that the errors were found and properly corrected in accordance with administrative requirements. Since this was done prior to the start of the test, the test proceeded without procedure delays. The test was performed in an efficient, professional manner. Communications between the STE and other participants supporting the test were clear and concise.

The test steps were not conducted in the order in which they were written, but, rather were conducted in an order which facilitated more efficient use of time and manpower resources. The RRI noted that in Section 7.0 of the procedure there was a note stating, "Steps of this procedure may be performed in any order." The "steps" of the procedure were not defined, and, therefore, if the step-by-step sequence of testing each component were to be conducted out of the order written, the test would be invalid. The RRI discussed this with licensee management, pointing out the fact that

the STE ultimately decides which steps can be done in any order and which cannot. To date, there have been no known instances where steps were erroneously conducted out of sequence. The licensee contended that STEs are adequately trained to make proper choices without impacting the intent of the test. In fact, approximately 50% of the STEs are the authors of the tests they are performing, and, thus, have a complete understanding of the intent. However, the licensee acknowledged the RRI's concern and is considering the application of more concise statements in procedures with regard to sequence.

During the valve interlock and control circuit test of valve 1-8807A (safety injection suction header cross-connect), the valve did not change position when the control panel switch was operated. This was caused by a section of tubular scaffolding leaning against the valve handwheel clutch, which in turn disengaged the remote operator. Upon removal of the scaffold, the valve was cycled. No apparent damage was done. There was an operator at the valve. However, he did not realize the scaffold would cause a problem. The STE and licensee management were cautioned by the NRC resident inspectors that this kind of operating interference can be common while construction is going on, and as such the operators must be alert for it. The licensee agreed and indicated that the STEs are well aware of these conditions. As such, they are normally sensitive to potential construction interferences with operating components and take appropriate actions to clear them. The licensee committed to reiterate the need for caution in this area to STEs and operating personnel.

c. 1CP-PT-37-02, "Condensate Storage and Transfer System"

The objective of this test was to verify operability of the automatic condensate storage tank level control system and that it responds correctly to "A" and "B" Train safety injection signals.

On May 1, 1984, the NRC inspector observed the STE experiencing some difficulty getting started because prerequisites could not be satisfied; i.e., instrument air system was not in service. Since it was not needed to support some of the circuit test, the STE processed a change to delete the requirement until needed. This turned out to be academic, as the service air system soon became available.

During testing of the condensate transfer pump low suction pressure trip test, the STE encountered difficulty in trapping pressure in the pressure switch by isolating the switch in accordance with Section 7.1.9 of the procedure because the test gage connections leaked and did not seal by tightening. The leak rate was slow

enough, however, such that by expediting performance of the procedure steps, there was sufficient pressure trapped long enough to accomplish the test. This reflects poor performance on the part of test equipment installing personnel and good thinking on the part of the STE in dealing with a test obstacle that could have caused unnecessary disruption of the test.

There were no other problems or concerns associated with this test.

d. ICP-PT-57-01, RT-2, "Safety Injection Pump Performance, Retest 2"

The objective of the test was to balance the four cold leg injection flow paths and the two hot leg injection paths.

Difficulty was encountered in completing the prerequisite section of the test. Several test procedure deviations (TPD) had to be written in order to complete the prerequisites. One of the difficulties encountered was an attempt to use an approved operating procedure, SOP-201A, "Safety Injection System," to line up the safety injection system for the test. Since SOP-201A is a procedure for normal operations, it would not support the performance of the test. This resulted in having to write a TPD for a lineup that would support the test. This is an example of failure to provide adequate prerequisites to support the test.

Another difficulty was the apparent lack of communication between the startup group and operations group. In addition to the communication and coordination difficulty, the flow transmitters malfunctioned and had to be replaced. Properly calibrated transmitters were obtained and installed; however, this resulted in numerous delays in the start of the test. Once these problems were corrected and the test had begun, the test steps were performed smoothly and without incident.

After verifying that the correct revision of the specific preoperational test was in use, the NRC inspectors verified, during the test performance, that:

There were sufficient personnel to perform the test.

The test steps were performed in the proper sequence to yield valid results.

Unforeseen equipment and procedure problems were reviewed and documented.

Test personnel observed procedural hold points.

The NRC inspectors observed testing activities both on and off normal working hours and during the weekends.

No other violations or deviations were identified.

3. Monitoring of TDI EDG Inspection

During this reporting period, the RRI monitored the disassembly, inspection, and records generation on EDG Serial 76001, which is Unit 1, Train "A" EDG and on Serial 76002, which is Unit 1, Train "B" EDG. This work is part of the recertification program of TDI diesels at CPSES and several other nuclear power plants. An overall report on the inspection of the Train "A" EDG from start to finish has been published on June 6, 1984, as NRC Special Inspection Report 50-445/84-17. Train "B" EDG work is being accomplished over a much shorter time span and the NRC site inspection activities related to the recertification of the Train "B" EDG will be reported on NRC Special Inspection Report 50-445/84-20 to be published after the work is completed.

The RRI observed work in progress; checked for procedure compliance; and verified material segregation and control, cleanliness control, and documentation of findings. Personnel were interviewed as work progressed to ascertain that they were properly trained, briefed, and in possession of the required procedures and work authorizing documents.

Unit 1 Train "A" EDG

At the beginning of this reporting period, cylinder heads were being installed and most of the inspections had been completed and documented on Train "A" EDG.

The RRI witnessed installation of the cylinder heads and noted that good work practices were being utilized in the handling and maintenance of cleanliness. A quality control inspector was present to perform detailed inspections of all mating surfaces to assure the absence of nicks, burrs, and foreign material.

On May 16, 1984, just prior to final closure of the crankcase, the RRI inspected the internals and found no problems. The crankcase had been thoroughly cleaned and inspected prior to this point.

Installation of cylinder head sub-covers and valve covers was observed by the RRI. Although there were no problems with the physical work process, one on-the-spot change to the procedure was entered but not initialed by the person required to do so before proceeding. The licensee is utilizing maintenance mechanical instructions which have been previously written for work on the EDGs. During the initial use of these instructions, necessary on-the-spot changes had been properly executed in most cases. This observation of a failure to initial a change appeared to be an



isolated instance, but the RRI brought it to the attention of the quality control and maintenance supervisors, whereupon the condition was corrected. On May 8, 1984, the quality control supervisor issued a memo which was used to brief personnel on the importance of keeping procedures in order and changes properly signed. The importance of good housekeeping practices was reiterated. There were no further problems in this area.

The RRI conducted detailed reviews on 14 inspection plan (I.P.) documentation packages. There was an excellent representation of what was inspected and to which acceptance criteria. Many photographs were used. In general, the "paper trail" was satisfactory with a few exceptions as noted below. The following I.P.s were reviewed by the RRI:

<u>I.P.</u>	<u>Subject</u>
I.P.-15	Turbocharger Butterfly Valve Assembly
I.P.-19	Turbocharger Bracket Bolting
I.P.-20	Rocker Arm and Push Rod Assembly
I.P.-21	Cylinder Block
I.P.-24	Cylinder Liners
I.P.-25	Starting Air Distributor
I.P.-27	Pistons and Piston Pin Assembly
I.P.-28	Governor Linkage
I.P.-29	Control Panel Cleanliness
I.P.-31	Exhaust Manifold Bolting and Gaskets
I.P.-32	Cylinder Block Line and Manifold Nuts
I.P.-33	Turbocharger
I.P.-34	Crankcase Assembly
I.P.-36	Base and Bearing Caps

Of the 14 I.P. packages sampled, it was noted by the RRI that 8 had nonconformance reports (NCRs) that were not closed. At this point in time, the engine was being prepared for starting and break-in of the new piston rings. The RRI expressed concern to the licensee's quality assurance supervisor that running the equipment with unresolved deficiencies would violate procedures and is not in the best interest of quality. The response was that all NCRs written against the engine would be cleared or conditionally released before the engine is operated. "Conditional release" means in broad terms that an engineering evaluation has been conducted and quality of the equipment will not be compromised if the equipment is operated. This concept is frequently needed in order to conduct in-process equipment checkouts prior to final restoration to service.

After the engine had been run, the RRI noted that some of the NCRs were still open and not conditionally released. For example: NCR 84-0097 rejected all of the pistons pins for wear, and the I.P.-27 package had

no documentation showing this to be an acceptable, "use as-is" condition. Upon questioning the licensee's quality control supervisor, it was revealed that the "hold tags" that would have prevented premature engine operation were removed from the engine control panel without proper authority. However, there was other documentation showing that the engine could be safely operated "as-is." This is a violation of the STA-405, Revision 5, which is the administrative procedure controlling NCRs. The quality control supervisor immediately placed the equipment back in a "hold" status so that this could be properly resolved. A deviation report was initiated by the licensee to document the procedure violation. There were four other NCRs with the same problem.

The package for I.P.-33 (Turbocharger) had notations stating that dimensions specified could not be taken because, "the needed measuring equipment was not available." The QC inspector put "N/A" for the attribute on the inspection report and the Level III inspector approved the inspection report for closure. This is in violation of Section 4.4 of QPM-004, "Inspection Report." The inspection report and the I.P. had not been revised to delete the requirement to take measurements. The licensee issued a deviation report to document and provide for corrective action.

The above problems are examples of failure to follow procedure as described in the Notice of Violation attached to this inspection report.

The RRI noted a few instances where the quality control inspector indicated "satisfactory" on inspection reports when unsatisfactory or indeterminate conditions existed. On the surface, this appeared to be a problem; however, the QC inspector was "inspecting and reporting" rather than inspecting for acceptance or rejection against given acceptance criteria. As such the QC inspector indicated that he had satisfactorily conducted the inspection specified on the inspection report. Because of the investigative nature of the TDI Owners' Group inspections, there were many cases where acceptance criteria were yet to be determined; thus, many of the inspection tasks were to simply report what is seen. QPM-004, "Inspection Report," which is the procedure that implements the use of inspection reports, states that acceptance criteria shall be included in the instructions to the inspector that are entered on the inspection report form. It does not adequately provide for "inspect and report" situations. The licensee is considering a change to QPM-004 to accommodate such situations in the future.

In the I.P.-32 package, the RRI noted that the I.P. was revised over the signature of the previous revision, lending confusion to what acceptance criteria was used in evaluating defects on cylinder block nuts. The inspection report was closed out with a satisfactory reinspection, yet the related nondestructive examination report still showed the rejection. No NCR was written to provide the necessary followup. The "paper trail" in

this I.P. package was inadequate. The QC supervisor indicated that he would make the proper corrections or additions because the required data was available and that quality of the hardware had not been compromised. This problem is (open) Unresolved Item 50-445/8418-03.

4. Plant Status

The following is a status of TUEC (TUGCO) manning levels for operations and plant testing activities as of May 31, 1984:

a. Operations Manning Status

Authorized personnel level (including maintenance, operations, administration, quality assurance, and engineering) - 541

Number presently onboard - 482

b. Plant Testing Status

The present status of the NRC preoperational testing phase inspection program is approximately 40 percent complete.

The licensee preoperational testing program is as follows:

Test Completion Status

Preoperational Tests - 97

Acceptance Tests - 44

No violations or deviations were identified.

5. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations, or deviations.

One such item, disclosed during the inspection, is discussed in paragraph 3 above.

6. Exit Interview

An exit interview was conducted June 1, 1984, with licensee representatives (identified in paragraph 1). During this interview, the SRRI and RRI reviewed the scope and discussed the inspection findings.

7-26-84

In Reply Refer To:  
Docket: 50-445/84-20

Texas Utilities Electric Company  
ATTN: M. D. Spence, President, TUGCO  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

Gentlemen:

This refers to the special inspection conducted by W. F. Smith, Resident Inspector, of this office during the period May 3 through June 19, 1984, of activities authorized by NRC Construction Permit CPPR-126 for the Comanche Peak Facility, Unit 1, and to the discussion of our findings with Messrs. B. R. Clements, J. C. Kuykendall, and other members of your staff at the conclusion of the inspection.

Areas examined during the inspection included the teardown, inspection, and reassembly of Unit 1, Train "B" emergency diesel generator in accordance with the Transamerica Delaval Owners' Group recertification program. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with personnel, and observations by the inspector. These findings are documented in the enclosed inspection report.

Within the scope of the inspection, no violations or deviations were identified.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room unless you notify this office, by telephone, within 10 days of the date of this letter, and submit written application to withhold information contained therein within 30 days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1).



Texas Utilities Electric Company

-2-

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

Sincerely,

Original Signed By:  
Richard L. Bangart  
Richard L. Bangart, Director  
Division of Radiation Safety and  
Safeguards

Enclosure:

Appendix - NRC Inspection Report  
50-445/84-20

cc w/enclosure:  
Texas Utilities Electric Company  
ATTN: H. C. Schmidt, Manager  
Nuclear Services  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

Texas Utilities Electric Company  
ATTN: B. R. Clements, Vice President, Nuclear  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION

REGION IV

NRC Inspection Report: 50-445/84-20

Construction Permit: CPPR-126

Docket: 50-445

Category A2

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), Unit 1

Inspection at: Glen Rose Texas

Inspection Conducted: May 3, 1984 - June 19, 1984

Inspector: D M Hunnicutt  
for W. F. Smith, Resident Inspector (RRI)

7/5/84  
Date

Approved: D M Hunnicutt  
D. M. Hunnicutt, Team Leader, Task Force

7/5/84  
Date

Inspection Summary

Inspection Conducted May 3 - June 19, 1984 (Report 50-445/84-20)

Areas Inspected: Special, announced inspection of work and documentation associated with the CPSES site portion of the recertification program implemented on Unit 1, Train "B" emergency diesel generator, Serial 76002, manufactured by Transamerica Delaval, Incorporated (TDI). The inspection involved 49 inspector-hours onsite by one NRC inspector.

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

DETAILS

1. Persons Contacted

Licensee Personnel

- \*B. R. Clements, Vice President, Nuclear Operations
- \*J. C. Kuykendall, Manager, Nuclear Operations
- \*R. A. Jones, Manager, Plant Operations
- \*D. E. Diviney, Operations Quality Assurance Supervisor
- \*J. C. Smith, Operations QA
- \*J. T. Merritt, Assistant Project General Manager
- \*T. L. Gosdin, Support Services Superintendent
  - D. A. London, Electrical Startup Group Leader
  - John Maxwell, Operations Quality Control Supervisor
  - C. W. Smith, Mechanical Maintenance Supervisor
  - Dean Lystad, Maintenance Supervisor
  - Curtis Marquis, Maintenance Supervisor
  - Billy Snellgrove, Quality Control Inspector, Level III
  - M. R. Blevins, Maintenance Superintendent
  - G. E. Jergins, Mechanical Maintenance Engineer
  - Duerk Reimer, Maintenance Engineer
  - J. M. Mackay, Maintenance Engineer

Others

- V. Lyndstrom, TDI, Technical Representative

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

\*Denotes those present during the exit interview.

2. Emergency Diesel Generator Inspection (General Comments)

The emergency diesel generators (EDGs) at CPSES were supplied by TDI. There are four machines, two per unit. TDI has provided 53 other emergency diesel generators for 14 other nuclear power plant sites in the United States. On August 12, 1983, the main crankshaft on one of the EDGs at Shoreham Nuclear Power Station broke into two pieces during a load test. There have been several 10 CFR Part 21 reports issued by TDI reflecting a variety of minor and major defects; i.e., cracks in piston skirts, push rod cracks, governor drive coupling failures, potential failures in fuel lines, and dimensional problems with component fasteners and dowel pins. These defects are generic in nature, even though there are some design differences between EDGs at CPSES and

those at other plants. During the course of the evaluation of the Shoreham failure and the repairs of the Shoreham EDGs, information related to the operating history of TDI engines and the quality assurance program of the manufacturer has been identified which calls into question the reliability of all TDI diesels. As a result of the foregoing and the generic implication involved, an "Owners' Group" consisting of representatives from affected nuclear power plants was formed for the purpose of investigating all aspects of quality and reliability of the EDGs supplied by TDI.

In anticipation of comprehensive internal inspection and tests, and to facilitate correction of already known defects, the licensee commenced teardown of the first machine (EDG Serial 76001) on February 20, 1984. The inspections and reassembly were completed on or about May 16, 1984. NRC resident inspection efforts on this work are documented in NRC Special Inspection Report 50-445/84-17 dated June 20, 1984.

Teardown of the second unit (EDG Serial 76002) commenced on May 3, 1984. Inspection efforts included (but were not limited to) observation of the work in progress, review of procedures used and compliance thereto, and tracking the work to ensure the plan is followed and adequately documented.

This project is being accomplished by Texas Utilities Generating Company (TUGCO) maintenance department personnel, rather than site construction (Brown & Root) personnel. This has provided TUGCO with a unique opportunity to gain valuable experience in the maintenance aspects of the EDGs and to exercise the written instructions that had been prepared for future maintenance outages. As a result of lessons learned on the first EDG, many of the procedures were revised to provide better guidance on the second EDG.

The overall performance and attitude of personnel associated directly with the project were good. The mechanics and quality control inspectors exhibited care in the segregation and identity of components and in cleanliness, foreign material exclusion, and protection of vulnerable surfaces with a few exceptions as noted in the details below. It was apparent that much was learned from the first EDG as evidenced by fewer procedure revisions and excellent schedule performance.

### 3. Chronology of Events

Due to the length of this inspection period, a weekly summary of events is provided below. The RRI generally inspected work in progress on a daily basis.



May 2 ~ 6, 1984

During the first week, disassembly on the Train "B" EDG, Serial 76002 commenced (from this point to the end of the report, this unit will be referred to as the "EDG"). By the end of the week, the cylinder heads and some pistons were removed along with the fuel and cooling water lines, intake elbows, valve covers, and subcovers. In the first EDG, pistons and connecting rods had to be disassembled in the EDG room and placed on fork lift pallets. For the Train "B" EDG, special stands were built to accommodate the piston/connecting rod assembly as a unit which received the units as they came out of the engine and could be lifted and carried to the shop in one motion.

May 7 - 13, 1984

All pistons and liners were removed. The disassembly, inspection, and reassembly of the main journal bearings were well underway. In the shop, component inspections were in progress so that the components would be ready for reinstallation on the EDG when needed. In one instance, the RRI noted that emphasis on the segregation and protection of parts in the EDG room began to weaken as a result of apparently greater emphasis being placed on schedule progress. This was brought to the attention of licensee management and the problem was promptly corrected.

May 14 - 20, 1984

The RRI observed the mechanics experiencing difficulty in reinstalling the lower half of number 10 main journal bearing insert. Apparently during shipment, the EDG was exposed to forces which caused longitudinal movement of the crankshaft, thereby damaging the bearing insert. This was discovered during the initial installation, but the bearing insert was replaced in such a manner as to force the locating dowels out of alignment. This in turn resulted in raised metal and scoring marks. The bearing inserts were again replaced and installed properly.

Although the inspection procedure being followed by the licensee does not address fastener devices, the RRI independently inspected the overspeed governor power takeoff bracket inside the engine, looking for improperly installed fastener locking devices as was found in the first EDG (Serial 76001). The same problem was found: three out of four of the capscrews holding the bracket were improperly locked. If these fasteners were to vibrate loose, they would drop into the timing gears and could cause severe damage to the EDG, and the fuel booster pump and overspeed protection would probably not function. The licensee has not completed his formal evaluation of this event in the first EDG, and, apparently, the informal lessons learned from the first EDG did not include checking this attribute on the second EDG. The RRI requested the licensee's

qualify control inspector to document the problem on a nonconformance report so that an engineering evaluation as to 10 CFR 50.55(e) reportability will be conducted. An NCR was written by the licensee when the same problem occurred on the first EDG. The licensee's procedures require such evaluation.

Shop inspection of the turbochargers revealed a missing blade on the right bank turbocharger turbine rotor. This and other defects brought about replacement of the right bank turbocharger with a spare, and replacement of the rotor, bearings, and thrust collar in the left bank turbocharger. The licensee is investigating the defects as to cause.

May 21 - 27, 1984

The RRI observed eddy current tests being conducted by Failure Analysis Associates personnel. The results were satisfactory. All main bearing inspections were completed this week.

On May 22, 1984, the RRI witnessed timing gear backlash measurements. When he arrived at the job site, the mechanics were attempting to jack the timing gears over by using a steel pry bar which was about 5-feet long. The pry bar was wedged between the frame of the engine and the timing gear teeth. The TDI representative was present. The RRI voiced his objection to such a work practice, because it was obvious to him that the gear teeth were being subjected to possible damage. The instructions did not specify the bar material, because it was originally written to place a pry bar through the web of the gear rather than jack against the gear teeth. However, access was restricted such that it was necessary to change the procedure and jack against the teeth.

The problem should have specified a soft metal such as brass. A brass bar appeared on the scene shortly after the RRI identified the problem. This was an isolated case where mechanics failed to use good work practices; however, licensee management was made aware of this activity so that actions could be taken to preclude future problems.

May 28 - June 3, 1984

During this week, the reassembly of the EDG was essentially completed, with the exception of some auxiliary system work and installation of the overspeed governor adapter plate. This was delayed because of the necessity to realign the power take-off coupling. One of the preidentified inspection plans was to check this coupling. It was out of alignment enough to require documentation to authorize elongation of the plate bolt holes and installation of dowel pins in a new location. The work was done in accordance with approved procedures.

June 4 - 10, 1984

While preoperational testing was in progress on the first EDG, this EDG was locked up with no work going on except to flush out a repaired fuel return line that had to be cut to accommodate the overhead hoist that was used to remove heavy parts.

On June 19, 1984, the RRI conducted a review of all the documentation packages related to the Owners' Group inspection plans. The plans were implemented by a "Maintenance Action Request", which is a work authorizing document used by the licensee. The request had 49 attachments, each representing a finite portion of the Owners' Group plan as well as some of the licensee's own initiatives. Accomplishment of the 49 attachments has provided a documentation package which will be submitted to the TDI Owners' Group, so that the CPSES EDGs can be recertified to the NRC as a viable source of emergency power.

The RRI reviewed the following packages which were signed off as completed:

<u>ATTACHMENT NO.</u>	<u>SHORT SUBJECT</u>
1	Turbocharger Inspection
2	Bearing Cap Base Assembly
3	Main Bearing Studs and Nuts
4	Main Bearing Caps
5	Crankshaft
6	Main Bearing Shells
7	Crankcase Assembly
8	Cylinder Block
9	Cylinder Liners
10	Cylinder Head Studs
11	Cylinder Head Nuts
12	Jacket Water Inlet Manifold Coupling

<u>ATTACHMENT NO.</u>	<u>SHORT SUBJECT</u>
13	Water Discharge Manifold Coupling and Seals
14	Front Gear Case Assy.
15	Connecting Rods & Bushings
16	Connecting Rod Bearing Shells
17	Pistons
18	Pistons Rings
19	Wrist Pins
20	Intake, Exhaust, and Fuel Tappet Assemblies
21	Camshaft
22	Gear Train Visual Inspection
23	Cam Shaft Cover Bolting and Gaskets
24	Air Start Valve
25	Old Cylinder Heads
26	Intake and Exhaust Cylinder Valves
27	Cylinder Head Valve Cover, Bolting, and Gasket
28	Valve Spring Color Codes
29	Subcover Assembly
30	Fuel Pump Control Shaft Linkage
31	Intake Manifold Elbows
32	Crankcase Covers
33	Exhaust Manifold



<u>ATTACHMENT NO.</u>	<u>SHORT SUBJECT</u>
34	Intermediate, Intake, and Exhaust Rocker Arms
35	New Push Rods
36	Lifters
37	Rocker Arm Assembly Hold Down Bolts
38	Overspeed Trip Governor and Accessory Drive Assembly
39	Over Trip Governor Coupling
40	Governor Drive Vertical Shaft Coupling
41	Governor Drive Coupling
42	Governor Linkage
43	Governor Heat Exchange
44	Engine Driven Jacket Water Pump
45	Intercooler Piping Coupling
46	Turbocharger Bracket Air Butterfly Valve Assembly with Actuator

Attachments 47, 48, and 49 were not yet completed as of this inspection. They involve external turbocharger bracket bolting inspections, control panel cleanliness, and lube oil sump tank connection tightness, respectively.

More than half of the inspections yielded satisfactory results. Many of the others involved defects which were expected; i.e., were found on the first EDG, or were previously identified by TDI reports made under the purview of 10 CFR Part 21.

Each "attachment" contained a current copy of the Owners' Group or TUGCO originated inspection plan with an acceptance criteria or instructions to "inspect and report". The Level III QA supervisor included an inspection report form. This form was used in conjunction with a "Component Condition Report" by the inspector as the means to document his findings.

Each attachment had related sketches, pictures, and required nondestructive examination records to document the multitude of methods used such as Radiography, Magnetic Particle, Liquid Penetrant, Eddy Current, and visual inspections.

The RRI noted that the documentation is in a clear and logical order, which should provide adequate support to the TDI Owners' Group.

No deviations or violations were found during this inspection.

3. Exit Interview

On June 1, 1984, an exit interview was conducted with the personnel listed in paragraph 1 above to discuss the inspections conducted by the resident inspectors for the month of May 1984. The contents of this inspection report were covered to the extent that a special exit meeting was not warranted.