APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-445/93-06
50-446/93-06

Operating License: NPF-87

Construction Permit: CPPR-127

Licensee: TU Electric
Skyway Tower
400 North Olive Street, L.B. 81
Dallas, Texas 75201

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

Inspection At: CPSES, Glen Rose, Somervell County, Texas

Inspection Conducted: January 13-22, 1993

Inspectors: P. C. Wagner, Team Leader, Division of Reactor Safety

C. E. Johnson, Reactor Inspector, Maintenance Section
Division of Reactor Safety

W. M. McNeill, Reactor Inspector, Engineering Section
Division of Reactor Safety

Approved: Arthur T. Gwynn Jr 2-10-93
Thomas F. Westerman, Chief, Engineering Section, Division of Reactor Safety — Date

Inspection Summary

Areas Inspected (Unit 1): Routine, announced inspection of the actions taken to resolve problems identified during the construction of Unit 2.

Areas Inspected (Unit 2): Routine, announced inspection of the hardware and controls for the anticipated transient without scram mitigation system and the moderator boron dilution control system. The inspection also included the review of construction deficiency reports.

Results (Unit 1):

- The licensee's actions in response to the reviewed construction deficiency reports were found to be acceptable (Section 4).

Results (Unit 2):

- The licensee's controls for the anticipated transient without scram mitigation system were found to be acceptable (Section 2).

- The licensee's controls to preclude a boron dilution event were found to be acceptable. As stated in an NRC letter to TU Electric dated June 8, 1992, the licensee's implementation of a boron dilution mitigation system will be addressed in separate correspondence (Section 3).

- The licensee's actions in response to the reviewed construction deficiency reports were found to be good (Section 4).

- The inspectors noted that problems and events at one of the units were communicated to the other unit to ensure that common problems were corrected on both units (Section 4).

Summary of Inspection Findings:

The following Construction Deficiency Reports were closed (for both units) in Section 4:

85-040 Flux Mapping System Restraints;
86-052 Electrical Cable Splices;
87-056 Pipe Whip Restraints;
87-120 Tornado Missile Protection;
87-122 Nozzle Loads;
87-132 Unqualified Limitorque Actuators;
87-133 High Energy Line Break Analysis;
88-014 Structure Seismic Analysis;
89-016 Turbine Driven Auxiliary Feedwater Pump;
92-004 Elgar Inverters;
92-008 Lube Oil Suction Valve;
92-010 Cracked Welds;
92-015 Circuit Breaker Mounting Hardware;
92-016 Three Inch Gate Valves; and
92-020 Cracks In Containment Spray System.

Attachments:

- Attachment 1 - Persons Contacted and Exit Meeting

- Attachment 2 - List of Acronyms

DETAILS

1 PLANT STATUS

During this inspection period, Comanche Peak Steam Electric Station (CPSES), Unit 1, was operating at power and Unit 2 was in the preoperational testing phase.

2 REVIEW OF TEMPORARY INSTRUCTION 2500/20, "INSPECTION TO DETERMINE COMPLIANCE WITH ATWS RULE, 10 CFR 50.62" (2500/20)

2.1 Background

The inspectors performed a review to ensure that the anticipated transient without scram (ATWS) mitigation system was in compliance with the ATWS Rule, 10 CFR Part 50.62. The inspection would normally verify the design, procurement, installation, and testing of the system. The inspectors determined that the Unit 2 system was the same as the Unit 1 system. Since the Unit 1 system was found to be acceptable in NRC Inspection Report 50-445/90-36; 50-446/90-36, an abbreviated inspection of the Unit 2 system was conducted.

2.2 Discussion

The licensee's ATWS Mitigation System Actuation Circuitry (AMSAC) design and operation was found to be acceptable in Supplemental Safety Evaluation Report (SSER) 22 dated January 1990. The discussion of the Unit 1 AMSAC included in the above inspection report was determined to be equally applicable to the Unit 2 installation. The inspectors also verified that system had been installed in a manner similar to that approved for the Unit 1 system.

The inspectors verified that Unit 2 Startup Test Procedure 2CP-PT-64-11, "AMSAC Operational Test," had been satisfactorily completed on September 5, 1992. The inspectors also reviewed Unit 2 Control Room Response Procedure ALM-0092B, "AMSAC Actuation and AMSAC Trouble." The inspectors noted that the concerns that had been identified with the Unit 1 procedures had been resolved. The procedures (both units) required that an Operations Notification and Evaluation (ONE) Form be initiated if the AMSAC was not restored to an operable status within 48 hours of a circuitry problem.

2.3 Conclusions

Based on the approval of an identical system installed in Unit 1, the inspectors determined that the design, procurement, installation, and testing of the Unit 2 system was acceptable. The inspectors determined that the licensee's controls of the system were acceptable.

3 REVIEW OF TEMPORARY INSTRUCTION 2515/94, "INSPECTION FOR VERIFICATION OF LICENSEE CHANGES MADE TO COMPLY WITH PWR MODERATOR DILUTION REQUIREMENTS, MULTI-PLANT ACTION ITEM B-03" (2515/94)

3.1 Background

All licensees were required to implement controls to preclude moderator boron dilution events. This Temporary Instruction was issued in March 1988 to verify that the controls proposed by the licensees had been implemented.

3.2 Discussion

The initial inspection using the guidance contained in this Temporary Instruction was documented in NRC Inspection Report 50-445/90-19; 50-446/90-19. That inspection verified that the provisions contained in SSER 24 had been implemented.

During this inspection, Final Safety Analysis Report (FSAR), Section 15.4.6 was reviewed to determine whether any changes had been made to the commitments that existed at the time of the initial inspection. The inspectors noted that the maximum dilution flow rate for Unit 2 was 140 gpm. This value was smaller than the 145 gpm value that had been calculated for Unit 1. The inspectors also noted that the operation of the boron dilution mitigation system was being actively reviewed by the NRC as a licensing issue. The latest NRC position on the operation of the boron dilution mitigation system was documented in NRC letter to TU Electric dated June 8, 1992.

The inspectors also reviewed portions of Procedure RFO-102, Revision 6, "Refueling Operations." The procedure applied to both units and contained a number of cautions to preclude a boron dilution event during refueling operations.

3.3 Conclusions

The inspectors determined that the licensee had implemented controls that were previously found to be acceptable. As stated in NRC letter dated June 8, 1992, the licensee's implementation of a boron dilution mitigation system will be addressed in separate correspondence.

4 ONSITE REVIEW OF CONSTRUCTION DEFICIENCY REPORTS (92700)

The inspectors reviewed selected construction deficiency reports submitted by the licensee in accordance with 10 CFR 50.55(e). The licensee submitted and tracked these reports as significant deficiency analysis reports (SDARs) in accordance with Procedure 2PP-9.01, "Evaluating and Reporting Adverse Conditions Under 10 CFR 50.55(e) and 10 CFR 21." The following construction deficiency reports were reviewed:

4.1 (Closed) SDAR CP 85-40: Flux Mapping Seal Table Restraints

By Letter TXX-88443 dated May 12, 1988, the licensee notified the NRC of a deficiency with the restraints of the Flux Mapping System (FMS). The FMS restraints were determined to be inadequate for the loads postulated during a seismic event. Specifically, portions of the FMS that were designed and fabricated as nonsafety-related were located directly above the seal table. The seal table forms a pressure boundary for the reactor coolant system. Failure of nonsafety-related portions of the FMS could, therefore, result in a breach of the pressure boundary. A seismic evaluation of the CPSES, Unit 1 and Unit 2, FMS was provided in Attachment A of Westinghouse Corporation Letter WPT-8128.

The licensee issued Design Change Authorization (DCA) 24060, Revision 1, and DCA 101940, Revision 1, to implement the necessary modifications. The inspectors reviewed the DCAs, the associated work documents, and inspected the completed work. The inspectors determined that the licensee had implemented appropriate actions to resolve the concern.

The resolution of the concern for Unit 1 was discussed in NRC Inspection Report 50-445/88-72; 50-446/88-72.

4.2 (Closed) SDAR CP 86-52: Electrical Cable Splices

The licensee reported a problem with the splice plates that connect sections of electrical cable trays. The splice plates had not been installed in a configuration that had been approved by the cable tray manufacturer. The licensee was concerned that the involved cable trays could fail and damage the contained electrical cables.

The inspectors reviewed Procedure CQP-EL-225, "Cable Tray and Supports," Revision 2. Paragraph 6.5.2.2, "Splice Plates," contained instructions to only use the manufacturer's standard splice plates. The inspectors also reviewed DCA 102188. The DCA was implemented to inspect and evaluate cable tray installations. The licensee completed these activities on July 16, 1992.

The inspectors also noted that numerous splice plates had been replaced as a result of the licensee's inspections. The inspectors determined that these actions resolved the problem.

4.3 (Closed) SDAR CP 87-56: Deficient Pipe Whip Restraints

By Letter TXX-88172 dated February 5, 1989, the licensee informed the NRC of deficiencies observed with pipe whip restraints. The Unit 2 corrective and preventive actions for this deficiency were provided by Letter TXX-91267 dated September 16, 1991.

The identified deficiencies included: (1) tightness in structurally bolted joints, (2) missing components, (3) levelness and plumbness deviations, (4) missing and damaged cotter pins, (5) improper application of locking

devices, (6) missing welds, and (7) incorrect cold gaps between pipes and restraints. The licensee stated that the cause of the discrepancies was inadequate engineering guidance provided for the installation of pipe whip restraints. As a preventive action, Specification CPSES-S-2006, "Structural Steel," was revised to include more definitive installation, inspection, and acceptance criteria.

The scope of the corrective actions included a 100 percent reinspection of the all pipe whip restraints listed in the revised specification. The licensee also developed Unit 2 procedures to delineate evaluation, tracking, and implementation responsibilities to ensure that initial gap adjustments were made before Hot Functional Testing. The inspectors reviewed the following documents to verify that revised procedural controls had been developed by the licensee:

- Specification CPSES-S-2006, "Structural Steel," Revision 1;
- CQP-ME-102-4, "Fabrication, Installation, Rework, Repair, and Replacement of Pipe Whip Restraints and Support Structures," Revision 1; and
- 2-EP-5.15, "Moment Restraint Support Qualification Procedure and Design Criteria," Revision 0.

Based on review of the above documents and the inspection records generated as a result of these documents, the inspectors determined that the licensee's corrective actions were satisfactory. The resolution of the concern for Unit 1 was discussed in NRC Inspection Report 50-445/89-85; 50-446/89-85.

4.4 (Closed) SDAR CP 87-120: Tornado Missile Protection

The licensee reported the potential existence of inadequate tornado missile barriers. The condition and proposed corrective actions were discussed in the licensee's Letter TXX-88036 dated February 4, 1988.

The corrective actions included modifications to improve the missile protection in each of the identified problem areas. Three of the four problem areas described in the SDAR were a concern for both Unit 1 and Unit 2. The fourth area involved the common manhole into the service water system tunnel. Since this area was located on the Unit 1 side of the facility, the missile protection problem was resolved with the other Unit 1 areas.

The addition of concrete barriers to the perimeter curbs for the safeguards building equipment hatches was specified by DCA 67098. These modifications were completed on September 24, 1991. The addition of steel plates on ten electrical duct manhole covers was implemented by DCA 102437 on August 4, 1992. The addition of stiffeners to the missile barrier doors for the emergency diesel generator equipment hatches was completed in accordance with DCA 95063 on July 31, 1989. The DCAs were reviewed by the inspectors and

found to provide reasonable corrective actions for the missile barrier concerns. The inspectors also performed a walkdown of selected equipment and verified that the design changes had been implemented.

4.5 (Closed) SDAR 87-122: Nozzle Loads

By letter dated December 31, 1992, the licensee provided a final report on potential deficiencies related to the seismic qualification of equipment nozzles. These deficiencies were originally reported in Letter TXX-88026 dated January 5, 1988. In the latest letter (TXX-92629) the licensee stated that the deficiencies involving Unit 2 equipment would be corrected by corresponding hardware modifications to those implemented on Unit 1. The resolution of the Unit 1 concern was documented in NRC Inspection Report 50-445/90-03; 50-446/90-03. The licensee also stated that the Unit 2 design validation effort had not identified any additional problems.

The inspectors noted that two of the four problem areas had been resolved by licensee reevaluation activities. The reevaluation activities utilized refined analysis techniques and determined that the existing condition was acceptable. The two resolved areas were the hydrogen purge exhaust filter (documented in TXX-92629) and the emergency diesel generator lube oil strainer (documented in TXX-89660). The resolution of the fan coil unit deficiency (as modified in TXX-89660) and the containment spray system heat exchanger deficiency were evaluated during this inspection.

The licensee issued DCA 93510 to modify the support structure for the containment spray system heat exchanger. The inspectors reviewed the DCA and verified that work authorizations had been properly completed to implement the modifications. The inspectors also reviewed the work authorizations and verified that the flexible connections and piping flanges for the fan coil units had been appropriately modified.

4.6 (Closed) SDAR CP 87-132: Unqualified Limitorque Actuators

The licensee performed inspections of the installed limitorque actuators as part of the equipment qualification validation program. The installation of unqualified terminal blocks, wiring, switches and connectors were identified in several actuators. These conditions were reported in the licensee's letter TXX-88027 dated January 5, 1988.

The licensee performed engineering evaluations of the identified conditions. The evaluations were documented on TUEvaluation Forms 90-19, 90-20, 90-21, 90-29, 90-31, and 90-32. The inspectors reviewed these forms and found them acceptable. The corrective actions for the identified problems were implemented by DCA 94555.

4.7 (Closed) SDAR CP 87-133: High Energy Line Break (HELB) Analysis

The licensee discovered several deficiencies with various aspects of the HELB analysis. The previous deficiencies were reported in SDARs CP 85-20, 85-46,

86-13, 87-53, 87-57, and 87-58. The licensee completed an evaluation in 1987 that determined the combination of the earlier identified deficiencies represented a significant inadequacy in the original HELB analysis. The licensee reported this finding to the NRC by Letter TXX-88118 dated January 18, 1988. The above SDARs were briefly discussed and incorporated into this SDAR in Letter TXX-91292 dated September 16, 1991.

The licensee's corrective actions consisted of a design validation effort and the development of a design basis document. The design validation was directed by Procedure ECE 2.24, "Systems Interaction Program." The design basis was documented in DBD-ME-007, "Pipe Break Postulation and Effects." The licensee completed Calculation 2-NU-0073, "High Energy Line Break Compare Model for Safeguards, Auxiliary and Fuel Buildings," on December 20, 1991. The calculation concluded that the systems were adequately designed and built for HELB considerations. The inspectors noted that the licensee made extensive use of comparison to the approved Unit 1 design. The inspectors determined that the calculation provided an acceptable HELB analysis.

The completion of the licensee's actions for Unit 1 was documented in NRC Inspection Report 50-445/90-03; 50-446/90-03.

4.8 (Closed) SDAR CP 88-14: Structural Integrity

By Letter TXX-88179 dated February 4, 1988, the licensee reported a deficiency involving load verification of seismic structures. During the design validation program, the licensee determined that an adequate final load verification program did not exist for Category I structures. This condition could compromise the design integrity of the structures if new loads were added to the original design loads. By Letter TXX-89446 dated July 31, 1989, the licensee revised the corrective actions to reflect changes that occurred in the load verification program.

The licensee developed a final load verification program under the following Project Instructions and Engineering Assessment Procedures:

- 2-IM-5.01, "Civil Structural Project for the Civil/Structural Group," Revision 4;
- 2-EP-5.17, "Reporting Attachment Loads Information to Civil Engineering," Revision 2;
- 2-EAP-014, "Containment Liner Attachments," Revision 3;
- 2-EAP-019, "Structural Steel Walkdowns Scope 'C' Civil/Structural," Revision 1;
- 2-EAP-036, "Global Load Verification of Seismic Category I," Revision 0; and

- 2-EAP-022, "Evaluation of Seismic Category I & II Concrete Embedments and Embedded Plates," Revision 0.

The licensee also performed walkdowns of structures utilizing the above procedures. The inspectors reviewed the procedures and verified some of the calculations. The inspectors concluded that licensee had adequately resolved this concern.

4.9 (Closed) SDAR CP 89-16: Turbine Driven Auxiliary Feedwater Pump

During testing of the turbine for the turbine driven auxiliary feedwater (TDAFW) pump, the licensee discovered a problem with the overspeed trip device. The trip device actuated at 3 rpm over the maximum allowable trip speed of 125 percent of rated speed. The observed tolerance of the trip device's setting could have resulted in a pump speed at which the developed discharge pressure would exceed the system design pressure. Since the pump had been disconnected for the turbine tests, no overpressure condition had occurred.

The licensee determined that a turbine overspeed condition would be unlikely while the TDAFW pump was supplying water to the steam generators because of the load presented by the pump. Therefore, the licensee determined that the as-found trip setting would not have adversely affected the safety function of the TDAFW pump. The licensee, however, lowered the setpoint of the overspeed trip device to preclude the possibility of an overpressure event.

The inspectors reviewed the results of Startup Test Procedure 2CP-PT-37-03, "Auxiliary Feedwater Turbine Driven Pump," Revision 0. The turbine overspeed trip portion of the test was completed on July 17, 1992. The turbine's overspeed trip device actuated at 4688 rpm during the first test and at 4788 rpm during the verification test. Since the speed during normal operation was 4075 rpm, the maximum allowable overspeed would be 5093 rpm (125 percent of rated speed). Therefore, the trip device was verified to actuate a turbine trip well within the allowable speed.

4.10 (Closed) SDAR CP 92-04: Elgar Inverters

By Letter TXX-92273 dated June 26, 1992, the licensee provided a final report on various deficiencies identified with the Elgar inverters. The deficiencies included construction and modification of printed circuit boards, defective transformers, incorrect wiring, and defective connectors. The report included a discussion of the corrective actions and a discussion that the deficiencies were not applicable to Unit 1.

The inspectors reviewed TUEvaluation Forms 91-2209, 92-6505, and 92-6519. These engineering evaluations contained the details of the identified problems and detailed the necessary corrective actions. The licensee initiated DCA 85958 to implement the recommended corrective actions. The majority of the corrective actions consisted of repairs made by the vendor with licensee QC verification of selected actions.

The inspectors also reviewed numerous vendor (Elgar) letters and memoranda. The vendor reviewed the Unit 2 inverter problems and determined that some of the problems resulted from interchanging parts during the initial Unit 1 startup sequence. The vendor implemented some manufacturing changes to preclude some of the problems. By letter dated March 25, 1992, the vendor issued a problem notification in accordance with 10 CFR 21 for one of the problems. The notification related to the failure to incorporate a design change for a resistor on a printed circuit board.

The inspectors reviewed completed Startup Test Procedures 2CP-PT-02-02A, -02B, -02C, and -02D, "118 Volt Class 1E Elgar Inverters." There were no non-conforming components identified during those tests. The Startup Engineer determined that the inverters met or exceeded the applicable specifications. The inspectors found the test results to be acceptable.

4.11 (Closed) SDAR CP 92-08: Lube Oil Suction Valve

The licensee found a broken piece of casting on the swing check valve (foot valve) in the suction line for the auxiliary lube oil pump of the Train B EDG. The factors contributing to the valve failure were determined to be valve disk hinge bolts that were too long and a casting flaw. Each EDG had a separate foot valve for the shaft driven and for the auxiliary lube oil pump. The failure of the foot valve would allow a short circuit of the lube oil and result in an engine lubrication problem.

The licensee evaluated the broken foot valve and implemented corrective actions. The evaluation was documented in TUEvaluation Form 92-5483. The corrective actions included performing magnetic particle examinations of all foot valve castings and replacing the valve disk hinge bolts in all of the valves installed in both Unit 1 and Unit 2 EDGs. The inspectors reviewed the evaluation and found it acceptable. The inspectors also noted that the work authorizations to implement the corrective actions had been completed in December 1992.

4.12 (Closed) SDARs CP 92-10 and CP 92-20: Cracked Welds in Containment Spray System Piping

By letter dated July 22, 1992, the licensee reported cracks in welds on the containment spray pump suction piping. On December 4, 1992, the licensee reported that cracks had also been found in the chemical eductor portion of the containment spray system. Additional cracks were found by the licensee during the followup activities.

The licensee's initial evaluations of the cracked welds were documented in TUEvaluation Forms 92-5473 and 92-5529. The corrective actions included repairing the welds and performing metallurgical analyses. The metallurgical analyses concluded that weld defects such as lack of penetration, burn through, porosity, and inclusions had resulted in the observed failures. The licensee determined that the same person had welded the failed joints. A sample of 13 of the 74 welds made by this welder were radiographed. Those 13

welds were found to be acceptable. The licensee, therefore, determined that the defective welds were isolated occurances.

The licensee found cracks in the chemical eductor portion of the containment spray system and issued TUEvaluation Form 92-6536 on October 9, 1992. Additional weld cracks were found on November 17 and December 8, 1992. These findings resulted in the issuance of TUEvaluation Forms 92-6856 and 92-6995. A metallurgical analysis associated with TUEvaluation Form 92-6856 concluded that the failures occurred because of unacceptable welding practices. The metallurgical analysis associated with TUEvaluation Form 92-6536 concluded the failures resulted from vibrational loads combined with welding practices.

The licensee initiated TUEvalation Form 92-6859 to perform a root cause analysis because repetitive failures had been identified. The root cause analyses concluded that fatigue failures had occurred. The corrective action recommendations of TUEvaluation Form 92-6859 included a study to reduce pump vibrations, a review of vibration calculations to assure acceptable margins, and a study to reduce overall system vibration. In addition, the licensee performed a review of preoperational test data and found nine configurations that appeared susceptible to similar failures. The licensee implemented DCAs to add supports for seven of configurations. The other two configurations had been previously modified.

The inspectors reviewed the above documentation and determined that the licensee had implemented appropriate corrective actions to address the deficiencies.

4.13 (Closed) SDAR CP 92-15: Circuit Breaker Mounting Hardware

By Letter TXX-92419 dated September 17, 1992, the licensee provided a final report related to undersized circuit breaker mounting bolts. The 12, 200-ampere circuit breakers manufactured by General Electric Company were designated as replacement spares for the 480 Volt motor control centers. The licensee determined that two of the four mounting bolts for each circuit breaker were undersized.

The licensee initiated TUEvaluation Form 92-5554 to determine the disposition of the problem. The two incorrectly sized mounting bolts were replaced with the proper bolts provided by the manufacturer. The licensee also performed inspections of an additional sample of circuit breakers and no discrepancies were identified. The licensee determined that the problem involving incorrectly sized bolts was a deficiency limited to the 12 circuit breakers that were purchased as spares. The inspectors reviewed the licensee's evaluation and corrective actions and found them acceptable.

4.14 (Closed) SDAR CP 92-16: Manually Operated Gate Valves

The licensee discovered two instances where manually operated 3-inch gate valves were defective. The valve stems were found to have separated from the valve disk because the disks were firmly wedged into the valve seats. Since

these were rising stem type valves, the upward movement and position of the stems would have provided erroneous indication that the valves were open. The two failed valves were associated with the TDAFW pump; one was located in the recirculation line, the other was located in the discharge line to the No. 4 Steam Generator.

The inspectors noted that a similar valve failure involving the same type of valve had occurred in Unit 1. That valve failure was documented on ONE Form 91-658. The inspectors were informed that the corrective actions for that problem had been completed.

The licensee reviewed the problem and determined that excessive closure force produced by oversized handwheels had caused the wedged valve disks. There were 22 of these valves installed in Unit 2. The licensee repaired the 2 failed valves and replaced the 20-inch with a 12-inch handwheel on all 22 of the valves. The handwheel size calculation was documented in DCA 103330. The licensee also initiated an action to install operator aids on the involved valves to caution against excessive closure force. The proper operation of the valves was also scheduled to be incorporated into operator awareness training.

The inspectors found the licensee's corrective actions to repair the failed valves and the actions to preclude a recurrence of the problem to be acceptable. However, the inspectors questioned the apparent lack of licensee action to determine the status of the remaining valves. The inspectors were concerned that undetected internal damage could affect the ability of the valves to perform as designed under accident conditions. The inspectors verified, however, that all of the valves were normally open and performed their accident response function in the open position. The valves were all manually operated and would only be closed to isolate their associated control valve. In addition, if the manual valves were closed for maintenance, the function of the flow path would be verified following completion of the work.

In order to provide further assurance of valve condition, the licensee performed radiographic examinations of 3 of the remaining 20 valves. The licensee's sample included the Unit 2 valve that corresponded to the valve that was found failed in Unit 1. The inspectors viewed the radiographs and did not identify any damage.

ATTACHMENT 1

1 PERSONS CONTACTED

1.1 Licensee Personnel

*M. Blevins, Director of Nuclear Overview
J. Conly, Licensing Engineer
E. Dalasta, Assistant Lead Mechanical Engineer
J. Disser, Structural Scope C Overview Engineer
G. Fanning, Quality Control Supervisor
J. Green, Licensing Engineer
N. Hammet, Construction Engineer
*T. Heatherly, Licensing Engineer
G. Hietpas, Civil/Structural Engineer
D. Thomas, Construction Engineer
T. Trails, Licensing Engineer
*C. Rau, Project Manager, Unit 2
D. Rencher, Supervisor Balance of Plant Mechanical Systems
C. Robinson, Supervisor, Civil/Structural Engineering

1.2 NRC Personnel

D. Graves, Senior Resident Inspector, Unit 2
W. Jones, Senior Resident Inspector, Unit 1
*R. Latta, Resident Inspector, Unit 2

*Denotes personnel that attended the exit meeting. In addition to the personnel listed above, the inspectors contacted other personnel during this inspection period.

2 EXIT MEETING

An exit meeting was conducted on January 22, 1993. During this meeting, the inspectors reviewed the scope and findings of the report. Although the inspectors reviewed some proprietary information during the inspection, none of that material was removed from the site and none of the information has been quoted in this report.

ATTACHMENT 2

LIST OF ACRONYMS

ATWS	Anticipated Transient Without Scram
AMSAC	ATWS Mitigation System Actuation Circuitry
DCA	Design Change Authorization
EDG	Emergency Diesel Generator
FMS	Flux Mapping System
FSAR	Final Safety Analysis Report
gpm	Gallons Per Minute
ONE	Operational Notification and Evaluation
rpm	Revolutions Per Minute
SDAR	Significant Deficiency Analysis Report
SSER	Supplemental Safety Evaluation Report (NUREG-0797)
TDAFW	Turbine Driven Auxiliary Feedwater