

APPENDIX C

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-445/92-03      Unit 1 Operating License: NPF-87  
50-446/92-03      Unit 2 Construction Permit: CPPR-127  
Expiration Date: August 1, 1992

Licensee: TU Electric  
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: January 8 through February 1, 1992

Inspector: D. N. Graves, Senior Resident Inspector  
R. M. Latta, Resident Inspector  
C. E. Johnson, Project Engineer

Reviewed by: L. A. Yandell  
L. A. Yandell, Chief, Project Section B  
Division of Reactor Projects

Feb. 12 '92  
Date

Inspection Summary

Inspection Conducted January 8 through February 1, 1992 (Report 50-446/92-03)

Areas Inspected: Unannounced resident safety inspection of Unit 2 activities were performed including routine plant tours, action on previous inspection findings, followup on corrective actions for violations, licensee action on construction deficiencies and NRC Bulletins, preoperational test program implementation verification, instrumentation components and systems, and corrective actions.

Results: Within the areas inspected, housekeeping was determined to be acceptable; however, the control of combustibles, while satisfactory, could have been improved in the areas where hot work permits were active. One violation was identified, which involved inadequate storage of ASME Code Class I components (paragraph 2.3). Excellent communications were demonstrated between operations and startup personnel during the performance of dynamic testing of motor-operated valves (MOVs). Additionally, the comprehensive corrective actions, which were implemented by the licensee to resolve deficiencies associated with Seismic Category I, heating, ventilation, and air-conditioning (HVAC) duct and duct supports, were identified as a strength within the Unit 2 project management organization. Open Item 446/9035-01 and Violations 446/8602-17, 446/8620-02, and 446/8844-01 were reviewed and closed.

Significant Deficiency Analysis Reports (SDARs) CP-85-39, CP-85-54, CP-89-14, CP-87-127, CP-89-29, and CP-90-07 were reviewed and closed. IE Bulletin 89-01 was reviewed and closed.

Inspection Conducted January 8 through February 1, 1992 (Report 50-445/92-03)

Areas Inspected: No inspection activities were conducted on Unit 1.

Results: Not applicable.

DETAILS1. PERSONS CONTACTEDTU Electric

M. R. Blevins, Director, Nuclear Overview  
 H. D. Bruner, Senior Vice President  
 W. J. Cahill, Jr., Executive Vice President, Nuclear  
 C. B. Corbin, Licensing Engineer  
 J. W. Donahue, Operations Manager  
 W. G. Guldmond, Manager of Site Licensing  
 J. C. Hicks, Project Manager, Regulatory Support  
 T. A. Hope, Unit 2 Licensing Manager  
 J. J. Kelley, Plant Manager  
 D. M. McAfee, Manager, Quality Assurance  
 J. M. McClemore, Mechanical Construction Manager  
 J. W. Muffett, Manager of Project Engineering  
 S. S. Palmer, Stipulation Manager  
 D. Pendleton, Unit 2 Assistant Project Manager  
 P. B. Stevens, Manager, Plant Engineering  
 D. W. Schmidt, Quality Construction Supervisor  
 C. L. Terry, Director of Nuclear Overview  
 B. W. Wieland, Maintenance Manager  
 J. E. Wren, Construction Quality Assurance Manager

Citizens Association for Sound Energy

O. L. Thero, Consultant

In addition to the above personnel, the inspectors held discussions with various operations, engineering, technical support, maintenance, and administrative members of the licensee's staff.

2. UNIT 2 TOURS (71302)

During this inspection period, routine tours of the Unit 2 facility were conducted in order to assess equipment conditions, security, and adherence to regulatory requirements. In particular, plant areas were examined for evidence of fire hazards and installed instrumentation damage and to determine the acceptability of system cleanliness controls and general housekeeping. Additionally, the inspectors conducted evaluations of existing plant programs for the preservation and maintenance of installed systems and components.

Housekeeping, in general, was acceptable and, with the exception of the violation described in paragraph 2.3, appropriate provisions for the segregation and control of quality-related (Q) material had been implemented. The inspectors also determined that installed systems and components were being protected and that, in general, the observed work activities were well controlled.

## 2.1 Control of Hot Work

During routine tours of the facility, inspectors noted that the control of combustibles, while satisfactory, could have been improved in the areas where hot work permits were active. Also, the blankets installed to protect equipment below the work area from sparks did not appear as though they would be completely effective in preventing sparks from falling into the next lower level. The inspector also observed that a hot work permit was posted in an area inside containment when the expiration date on the permit had been exceeded. Construction management was notified of these observations and actions were immediately taken to remove nonessential material from the hot work permit zone, ensure the fire blanket was adequately installed, and remove the expired hot work permit. The licensee also determined that the work activity covered by the expired hot work permit had been completed prior to the expiration date and no subsequent hot work had been performed in that area. These observations, while of minimal safety significance in the noted cases, could lead to potential hazards if personnel attention to hot work permit requirements degrades.

## 2.2 Hydrostatic Test Observation

The inspectors witnessed a portion of the hydrostatic test on Line 6-CH-2-032-152-5, a containment cooling unit chilled water return line. The inspectors reviewed the hydrostatic test package, 2-CH-029, and verified that the test lineup was in accordance with the test package. The test pump relief valve was installed as required by the package, and the documentation in the work package indicated that the relief valve had been set at the appropriate pressure. While it appeared that the test results would not be satisfactory based on the observed pressure decrease, the associated testing activities were performed appropriately and no deficiencies were identified.

## 2.3 Inadequate Storage of ASME Code Class I Components

During the conduct of routine plant tours, the inspectors identified questionable storage and cleanliness controls associated with the pressurizer spray valves, 2-PCV-455B and 2-PCV-455C. Specifically, on January 15, 1992, the inspectors examined the subject valves and determined that minor damage to the valve actuators had occurred, instrument air tubing was uncapped, limit switch connections were exposed, and the bonnet fasteners and other related hardware for the two valves were inadequately identified. Subsequent to the identification of these issues to the licensee, TU Evaluation (TUE) Form 92-3529 was generated to evaluate the physical damage to the valves and recommend corrective actions as appropriate. The licensee's investigation determined that the valves had been inadvertently removed from containment Room 160 during an area cleanup in December 1991. The valves had been wrapped in plastic, placed on a small trailer, labeled as Q material, and stored outside the containment building. At some point during this storage duration, non-Q material (such as ladders and hoses) had been inappropriately stacked on top of the subject valves. The valves were in the process of being transferred to a Q-material storage area outside the protected area when the inspectors requested to examine the valves.

Brown & Root ASME Construction Procedure ACP-14.2, "Handling, Storage and Preservation of Code Material," Revision 3, in Section 6.1 stated, in part, that Attachment 7.1 listed the minimum requirements for each level of storage. Specifically, Attachment 7.1 stated that Code valves (Level "C" items) shall be stored indoors or the equivalent with all provisions of Level "B" requirements except that heat and temperature control is not required. Level "B" requirements stated, in part, that Level "B" items shall be stored within a fire resistant, tear resistant, weather tight, and well ventilated building or equivalent structure.

Contrary to the requirements of referenced Procedure ACP-14.2, the pressurizer spray valves were inadequately stored. This deficiency represented a violation of 10 CFR Part 50, Appendix B, Criterion V, which states, in part, that activities affecting quality shall be performed in accordance with prescribed procedures. (446/9203-01)

Following the above observation, the inspectors also examined six additional Q-material storage areas for adherence to the storage requirements specified in construction Procedure ACP-14.2. All observed material was stored on appropriate dunnage and the associated materials were adequately protected with covers. All piping and tubing was capped or taped with no exposed openings. No deficiencies were noted.

#### 2.4 Summary of Findings

Housekeeping and control of combustibles, while acceptable, had degraded slightly from previous inspections, particularly in the vicinity of hot work activities. Observed work activities were well controlled and executed. One violation was identified relative to the inadequate storage of the pressurizer spray valves (paragraph 2.3).

### 3. ACTION ON PREVIOUS INSPECTION FINDINGS (92701)

(Closed) Open Item 446/9035-01: Status of Cable Tray Attributes

This item was identified during the NRC evaluation of the licensee's onsite design activities which, in part, examined the process for the translation of Unit 1 postconstruction hardware validation program (PCHVP) reverification requirements to Unit 2. During this inspection effort, an issue was identified relative to the documentation and tracking of specific commodity attributes which were being evaluated by the licensee for applicability to Unit 2.

Specifically, Item 24 of the Unit 2 commodity attribute matrix (PCHVP-CAM-002), which involved cable tray location and routing, was to have its designation changed from verification required to not required. However, at the time of the original inspection, it was not evident that the 58 related cable tray attributes would be similarly designated.

During this reporting period, the inspectors reviewed Revision 4 of the Unit 2 commodity attribute matrix (PCHVP-CAM-002), ABB Impell Corporation



Calculation 0218-CT-001, and the associated Unit 2 attribute evaluation form. Based on the results of these reviews, it was determined that the licensee had correctly updated the matrix and that it accurately reflected the Unit 2 reverification requirements for the attributes associated with cable tray and cable tray PCHVP evaluations. Additionally, the inspectors reviewed the licensee's program for performing and documenting the evaluation of Unit 1 PCHVP results as defined in Engineering Procedure 2EP-2.04, Revision 1, "Evaluating Unit 1 Post-Construction Hardware Validation Program (PCHVP) Results For Applicability to Unit 2." It is noted that, as part of the design validation program for Unit 1, TU Electric developed installation specifications to implement the commitments and criteria included in the design basis documents. The installation specifications included inspection requirements and final acceptance attributes to confirm that installed items met the validated design requirements.

Each final acceptance attribute in the installation specifications for Unit 1 was listed in the PCHVP commodity attribute matrix which identified approximately 1840 attributes. The PCHVP for Unit 1 utilized either physical validations or engineering evaluation methodologies to ensure that each of the attributes in the commodity attribute matrix was confirmed. The inspectors' review of the licensee's program confirmed that a corresponding Unit 2 attribute analysis matrix (PCHVP-CAM-002) had been developed to show the translation of the Unit 1 PCHVP reverification requirements to Unit 2. It was also determined that the Unit 2 attribute analysis matrix identified for each attribute, the Unit 1 reverification requirement, the Unit 2 specification for acceptance criteria, the method of reverification for those items requiring reverification, the type of engineering justification for those items not requiring reverification, and other applicable documents and comments.

Furthermore, the inspectors ascertained that, for Unit 2 attributes which were determined to require reverification of completed construction work specifically due to the PCHVP, a "Y" (yes) code was specified in the Unit 2 reverification field of the matrix. As specified in Procedure 2EP-2.04, these "Y" coded attributes were evaluated for hardware acceptability by the licensee's engineering organization and were either reverified through the implementation of reinspections by construction or quality control personnel, or they were reverified using approved engineering methods indicated on the attribute analysis matrix.

Based on the inspectors review of the documentation associated with the translation of Unit 1 PCHVP reverification requirements to Unit 2, it was determined that the licensee had established appropriate programmatic controls for this process. Therefore, this item is closed for Unit 2.

#### 4. FOLLOWUP ON CORRECTIVE ACTIONS FOR VIOLATIONS (92702)

##### 4.1 (Closed) Violation 446/8602-17: Inadequate/undersized fillet welds on HVAC duct supports

This violation involved multiple examples of welding deficiencies associated with the HVAC system duct supports which were not detected by the requisite

quality control inspections. As stated in the licensee's response to this violation, which was contained in TU Electric's letter, TXX-6089, dated January 12, 1987, the cause of this condition was attributable to the inadequate implementation of procedures on the part of the previous HVAC contractor charged with the joint responsibility for design, fabrication, and quality control activities.

The inspectors reviewed the documentation involved with the corrective actions for this violation which were ultimately incorporated into the licensee's resolution of construction deficiency SDAR CP-85-54 (see paragraph 5.2 of this inspection report). These corrective actions included the selection of an alternate contractor for Unit 2 HVAC systems and the functional assignment of Q inspection activities to TU Electric's quality organization.

Additionally, as delineated in TU Electric's letter, TXX-91286, dated September 24, 1991, the licensee elected to replace all of the Seismic Category I HVAC ducts and duct supports for Unit 2. This process involved the design validation of the seismic qualification requirements and design criteria for both Category I air-handling units, plenums, and equipment supports and Category I HVAC duct and duct supports.

As previously documented in NRC Inspection Reports 50-445/91-09; 50-446/91-09 and 50-445/91-22; 50-446/91-22, extensive inspections associated with the fabrication, installation, and quality verification of safety-related HVAC systems for Unit 2 were performed. No deficiencies were identified as a result of these inspections and, based on direct observations of work in progress, walkdowns of completed HVAC installations, and records review, it was generally concluded that the licensee's safety-related HVAC installations were well controlled and properly implemented.

Based on the results of documented inspection findings and the conclusions derived from the review of the licensee's resolution of construction deficiency SDAR CP-85-54, the inspectors determined that the licensee had effectively implemented appropriate corrective and preventive actions to address the identified violation. Therefore, this violation is closed for Unit 2.

#### 4.2 (Closed) Violation 446/8620-02: Insufficient penetration on square groove welds

This violation involved welding process control inadequacies associated with the fabrication of Seismic Category I HVAC duct supports. Specifically, the HVAC contractor's welding and quality control procedures were inadequate in that they did not specify fit-up gap requirements nor were fit-up inspections of full or partial penetration welds required.

In response to this violation, related programmatic HVAC welding process control issues identified during third-party evaluations, and a previous NRC Violation 446/8602-17 (see paragraph 4.1 of this inspection report), the licensee initiated Corrective Action Request (CAR)-111, "Bahnon QA Program Inadequacies." The results of CAR-111 identified inadequate engineering, construction, and quality control programs for the contractor responsible for

HVAC duct work and equipment. Accordingly, based on the findings of CAR-111 and the corrective actions associated with the resolution of construction deficiency SDAR CP-85-54 (see paragraph 5.2 of this inspection report), the HVAC contractor was relieved of all responsibility for engineering, construction, and quality control activities at CPSES.

Subsequent project management initiatives, which were documented in TU Electric's letter, TXX-91286, dated September 24, 1991, resulted in the licensee's decision to replace all of the Seismic Category 1 HVAC duct and duct supports in Unit 2. The commensurate construction activities related to the fabrication installation and quality inspections of safety-related HVAC systems were evaluated and documented in NRC Inspection Reports 50-445/91-09; 50-446/91-09 and 50-445/91-22; 50-446/91-22. As a result of these inspections, no deficiencies were identified and it was generally concluded that the licensee had developed and implemented a well controlled program for the installation of safety-related HVAC systems and components for Unit 2.

Based on the results of documented inspection findings and the conclusions derived from the review of the licensee's resolution of construction deficiency SDAR CP-85-54, the inspectors determined that the licensee had effectively implemented appropriate corrective and preventive actions to address the identified violation. Therefore, this violation is closed for Unit 2.

#### 4.3 (Closed) Violation 446/8844-01: Steam generator manway removal and replacement

This violation involved a procedural deficiency which resulted in the incorrect translation of the nuclear steam supply system vendor's recommendations. Specifically, an error in Revision 3 of the currently superseded Mechanical Maintenance Instruction MMI-904, "Steam Generator Manway Removal and Replacement," resulted in the incorrect translation of the torquing practices which were specified in Westinghouse Technical Bulletin NSID-TB-87-01. This issue was previously reviewed and closed for Unit 1 as documented in NRC Inspection Report 50-445/88-46; 50-446/88-44. As a result of that review, it was determined that Procedure Change Notice PCN-MMI-904-R3-2, was issued on June 27, 1988, to correct Procedure MMI-904, Revision 3. As determined by the inspectors, this change was properly translated to Procedure MSM-CO-9904, Revision 1, "Steam Generator Manway Cover Removal and Installation," which superseded Procedure MMI-904, Revision 3. It was also noted by the inspectors that Procedure MSM-CO-9904, Revision 1, included the use of studs and nuts to secure the steam generator manway covers, instead of bolts, which was also recommended by Westinghouse in their Technical Bulletin NSID-TB-87-01, Revision 1.

With respect to the programmatic aspects of this violation, the inspectors determined that Procedure STA-202, Revision 17, "Administrative Control of Nuclear Operations Procedures," was revised on August 1, 1988, to provide guidelines for a technical review of nuclear operations procedures. Additionally, Procedure MDA-201, Revision 8, "Maintenance Department Procedure," was revised to provide for a procedure writer's checklist to be used by technical reviewers. This checklist included instructions to assure



that the procedures were technically adequate; that adequate procedural direction was provided; and that reference to other documents was correct, accurate, and current. These changes are currently encompassed in Procedure STA-202, Revision 22, Appendix 8C.

Based on the inspectors' review of the referenced procedural revisions, it was determined that the licensee had implemented appropriate corrective and preventive actions to address the identified violation. Therefore, this violation is closed for Unit 2.

#### 5. LICENSEE ACTION ON 10 CFR PART 50.55(e) DEFICIENCIES (92700)

##### 5.1 (Closed) Construction Deficiency SDAR CP-85-39): "Equipment Conduit Interface Discrepancy"

This construction deficiency involved electrical conduit which was not installed in accordance with the controlling design documents. Specifically, the identified interface concerns involved: (1) cable slack adequacy, (2) conduit-to-equipment interfaces installed outside the vendor approved entry areas, and (3) conduit orientation within the vendor approved entry area. As previously documented in NRC Inspection Report 50-445/89-07; 50-446/89-07, this item was reviewed and closed for Unit 1.

During this reporting period the inspectors reviewed the licensee's corresponding corrective actions for Unit 2, which were summarized in TU Electric's letter, TXX-88773, dated November 9, 1988. As stated in this letter, nine Class 1E electrical cabinets were potentially affected by conduit-to-equipment interfaces outside the vendor approved area. Subsequent engineering evaluations, which were performed by the licensee, determined that five of these cabinets were acceptable without rework. Furthermore, it was stated in the referenced letter that two of these five cabinets, which were determined to be acceptable without rework, were installed in Unit 2. Therefore, the licensee concluded that no further Unit 2 corrective actions were required to address the identified deficiency. These assertions were confirmed by the inspectors based on the review of the supporting documentation contained in Specification CPES-E-2004, Revision 1, "Electrical Installation"; Procedure CQP-EL-205, Revision 2, "Cable Installation"; and completed TUE Forms 91-622 and -911.

Based on the above reviews, the inspectors concluded that the licensee had implemented appropriate corrective actions to address the identified deficiency. Therefore, this construction deficiency is closed for Unit 2.

##### 5.2 (Closed) Construction Deficiencies SDARs CP-85-54 and CP-89-14: "Seismic Qualification of HVAC Supports and Cracked Turning Vanes in HVAC Systems"

These construction deficiencies involved discrepancies associated with the HVAC system. Specifically, SDAR CP-85-54 provided notification of inadequacies in the seismic qualification documents for HVAC supports, and SDAR CP-89-14 identified potential deficiencies in the safety-related HVAC duct elbows involving cracked and separated turning vanes. As documented in TU Electric's

letter, TXX-91286, dated September 24, 1991, the corrective actions associated with these two construction deficiencies were incorporated into the licensee's response to SDAR CP-85-54. With respect to Unit 1, these construction deficiencies were reviewed and closed as documented in NRC Inspection Report 50-445/89-76; 50-446/89-76.

During this reporting period, the inspectors evaluated the licensee's consolidated corrective actions associated with these issues. As documented in the previously referenced letter (TXX-91286), the existing Unit 2 HVAC Seismic Category I ducts and supports were replaced in lieu of performing an as-built and design verification/inspection of these components. Furthermore, the licensee stated that the Seismic Category I air-handling units, plenums, and equipment supports would be verified to be in conformance with the established design configuration control programs (engineering assessment procedures) or new duct and supports designs would be issued consistent with the clarifications provided in the reference letter. In order to confirm the adequacy of the licensee's corrective actions associated with SDAR CP-85-54 (seismic qualification of HVAC supports), the inspectors reviewed the following documentation:

- Corrective Action Request, CAR 111, Revision 3, "Bahnon QA Program Inadequacies"
- Specification CPES-H-2019, Revision 0, "Installation, Fabrication, And Inspection Requirements For HVAC Systems, And Accessories"
- Design Basis Document DBD-CS-086, Revision 1, "HVAC Duct And Duct Supports"
- Supplement 18 to Safety Evaluation Report related to the operation of the CPSES, Units 1 and 2 (NUREG-0797)
- Engineering Assessment Procedure 2-EAP-017, Revision 0, "Procedure For Gathering Input For Design Of New Seismic Category I HVAC Duct And Duct Hangers In Unit 2"
- Engineering Assessment Procedure 2-EAP-021, Revision 1, "As-Built Verification Of Seismic Category I HVAC Air Handling Units, Plenums, And Equipment Supports"
- Procedure 2IM-5.09 - HVAC, Revision 1, "General Instructions For Seismic Category I HVAC Duct And Duct Support Analysis"
- Procedure 2IM-5.11 - HVAC, Revision 1, "Procedure For Seismic Design Of Category I Air Handling Units, Plenums, And Equipment Supports"
- Procedure 2IM-5.08 - HVAC, Revision 1, "Seismic Design Criteria For Category I HVAC Ducts And Duct Supports"
- Unit 2 Construction/Quality Procedure CQP-HV-101, Revision 0, "Seismic Category I And Nuclear Safety Related HVAC Fabrication, Installation, Rework And Repair"

Based on these reviews and the extensive inspections associated with the fabrication and installation of safety-related HVAC systems, which were previously documented in NRC Inspection Reports 50-445/91-09; 50-446/91-09 and 50-445/91-22; 50-446/91-22, the inspectors determined that the licensee had effectively developed and implemented a comprehensive corrective action program for the establishment of the seismic requirements and qualification of validated configurations for Unit 2 HVAC duct and duct supports.

Relative to the specific issue identified in SDAR CP-89-14 involving cracked turning vanes in HVAC systems, the inspectors reviewed the applicable Installation Specification CPES-H-2019 and Quality Procedure CQP-HV-101. Additionally, the inspectors examined the turning vane welding requirements specified in Drawing H-2-005, Revision CP-1, "Rectangular Elbow Turning Vane Details."

Based on these reviews the inspectors determined that the current fabrication and inspection criteria specifically evaluated the HVAC turning vane welds for adequacy. Therefore, the original concern regarding cracks in the turning vanes was determined to have been appropriately addressed for Unit 2 applications.

As a result of these documentation reviews and corroborating inspection findings, it was determined that the licensee had effectively implemented comprehensive corrective actions to address the identified construction deficiencies. It was also determined that the licensee had appropriately resolved the reportability aspects of these issues. Therefore, these items are closed for Unit 2.

### 5.3 (Closed) Construction Deficiency SDAR CP-87-127: "Overstressed Platform and Support Structure Design"

By Letter TXX-88016 dated January 6, 1988, the licensee informed the NRC of a reportable issue involving overstressed platforms and supports. During the design validation process, the licensee identified that three Seismic Category I platforms, five Seismic Category II platforms, the recirculation sump screen support structure, and the cable spreading room support structure exceeded stress limits specified in Final Safety Analysis Report Sections 3.8.3.3 and 3.8.4.3. These discrepancies resulted from the failure of the original design organization to properly apply specified loading conditions. The deficiency was limited to Seismic Category I and II steel structures. As determined by the inspectors, the design validation program provided for a complete survey of these structures.

The inspectors determined that the licensee had completed the validation for Unit 2, and that the design drawings reviewed had been updated to show design changes/modifications. The inspectors also verified that all modifications and design changes were being tracked in the licensee's SCOPE data base (civil tags) tracking system. The inspectors also verified the field installation of several platforms utilizing updated design drawings.

Based on the above reviews and inspection activities, it was determined that the licensee had implemented adequate corrective actions to address the identified deficiency. Therefore, this construction deficiency is closed for Unit 2.

5.4 (Closed) Construction Deficiency SDAR CP-89-29: "Inappropriate Design Changes"

This construction deficiency involved the unauthorized substitution of fastener materials on the Unit 1 auxiliary feedwater pump motor fan. As documented in the licensee's interim report contained in TU Electric's letter, TXX-89798, dated November 15, 1989, the corrective actions associated with this issue were combined with the response to Violation 445/8935-01. The licensee's response to this construction deficiency and the related violation were reviewed and closed for Unit 1 as documented in NRC Inspection Report 50-445/89-85; 50-446/89-05.

During this reporting period, the inspectors reviewed the licensee's final response to this issue, which was contained in TU Electric's letter, TXX-91386, dated December 19, 1991. As delineated in this letter, the licensee's corrective actions for the referenced violation included the evaluation of all issued maintenance engineering evaluations (MEEs) to determine the safety significance of any other unauthorized design changes.

This process involved the licensee's review of approximately 600 MEEs. As a result of this review, 45 MEEs were determined to potentially involve unauthorized design changes. As determined by the inspectors, nonconformance reports were issued for each of the 45 questionable MEEs to evaluate whether the change resulted in a degradation of safety margin and MEEs, which involved an actual design change documented on authorized design change documents. One MEE associated with the mounting bolts for the auxiliary lubricating oil pump for the Unit 2 Train B centrifugal charging pump was identified as potentially safety significant. Specifically, the auxiliary lubricating oil pump, although not safety related, required qualified mounting bolts for seismic qualification of the pump/motor.

The inspectors reviewed the documentation associated with this construction deficiency, including the results of completed TUE Form 91-657. The inspectors also performed a field walkdown of the Unit 2 centrifugal charging pumps and determined that the correct fasteners had been utilized to mount the auxiliary lubricating oil pump. Based on these reviews and inspections of the installed components, the inspectors determined that the licensee had implemented appropriate corrective actions to address the identified deficiency. Therefore, this construction deficiency is closed for Unit 2.

5.5 (Closed) Construction Deficiency SDAR CP-90-07: "Safeguards Building Overtemperature Condition"

This SDAR was initiated in response to Special Report No. SR-1-90-006, which was addressed and closed in NRC Inspection Report 50-445/91-70; 50-446/91-70 for Unit 1. Specifically, this issue involved the inability of the HVAC



system in the main feedwater and main steam penetration areas to maintain the area temperatures below Technical Specification limits for Unit 1. A licensee review of the Unit 2 design for the same concern determined that this condition also existed on Unit 2.

During this reporting period, the inspectors reviewed the licensee's corrective actions associated with this design deficiency, which included replacing the chilled water coils in the ventilation units in the affected areas; installation of additional insulation to further reduce loss of heat from the areas' pipes, valves, and supports into these areas; the installation of a temperature element in the exhaust ductwork from the affected areas; and revision of the system operating procedure for the ventilation systems in these areas to more clearly state when both available sets of coolers should be in operation. This review included field verification of the installation of the new chilled water coils in Unit 2 and the installation of additional insulation and system operating procedure revisions in Unit 1. The inspector also verified that the appropriate measures were contained in the design modification packages (90-225 and 90-247) to either document the previous completion or to assure completion of all required actions for both units.

Based on the above review and evaluation, the inspectors determined that the licensee had developed, and partially implemented, effective corrective actions for the identified deficiency. Therefore, this item is closed.

#### 6. LICENSEE ACTION ON NRC BULLETIN (92701)

(Closed) NRC Bulletin 89-01: "Failure of Westinghouse Steam Generator Tube Mechanical Plugs," (Supplements 1 and 2)

This NRC Bulletin identified the failure of certain Westinghouse supplied mechanical plugs which were installed in steam generators. These plugs were designed to be installed in steam generator tubes that had been determined to be degraded to prevent the leakage of reactor coolant from the primary loop to the secondary system. The required actions associated with this bulletin were evaluated and closed for Unit 1 as documented in NRC Inspection Report 50-445/89-63; 50-446/89-63.

With respect to Unit 2, the inspectors evaluated the licensee's corresponding provisions for compliance with the actions requested by NRC Bulletin 89-01 and its associated supplements. These actions were summarized in TU Electric's letter, TXX-91279, dated August 1, 1991, which stated, in part, that none of the suspect plugs had been supplied to CPSES. The inspectors also reviewed the completed documentation associated with Westinghouse Field Change Notice TCXM-10722 as well as Design Change Notice DCA 95775, Revision 1, TUE Forms 91-331 and 92-335, and Procedure STA-733, Revision 0, "Steam Generator Tube Examination."

As a result of these reviews, it was determined that the licensee had implemented actions to ensure that the plugs from the suspect heats would be excluded from any future procurements. Furthermore, it was substantiated that the licensee had removed the Inconel 600 mechanical plugs from the Unit 2 steam



generators and that they were replaced with the recommended Alloy 690 mechanical plugs. Based on these reviews, the inspectors concluded that the licensee had satisfactorily addressed the actions requested by this bulletin. Therefore, NRC Bulletin 89-01 is closed for Unit 2.

#### 7. PREOPERATIONAL TEST PROGRAM IMPLEMENTATION VERIFICATION (71302)

Relative to the preoperational test program, the inspectors evaluated implementation of the licensee's management control system to determine if jurisdictional controls were observed for system turnovers, that systems/components undergoing testing were properly tagged, that maintenance activities and preoperational tests were adequately performed, that test discrepancies were properly identified, and that test procedures and operational verifications were satisfactorily conducted.

On January 27, 1991, the inspectors witnessed selected portions of Startup Operating Instruction SOI 2-92-CS-06, which performed dynamic flow testing on specified safety-related MOVs. In particular, the inspectors observed the operational testing of MOVs 8801 A and B, which are the discharge valves from the centrifugal charging pumps to the safety injection system. The inspectors determined that system lineups and test prerequisite actions had been appropriately performed and that all procedural requirements were satisfactorily performed. Communications between the control room operators and the locally stationed personnel were excellent and, based on preliminary reviews of the test data, all required objectives were acceptably accomplished. No deficiencies were identified by the inspectors during the witnessing of these activities.

#### 8. INSTRUMENTATION COMPONENTS AND SYSTEMS (52053)

During this reporting period, the inspectors performed direct observations and independent evaluations of work in progress and completed installations of safety-related instrument components and systems to determine if these activities were accomplished in accordance with NRC requirements, Final Safety Analysis Report commitments, and applicable licensee procedures. In particular, the inspectors witnessed the installation of the instrumentation tubing between steam generator level Transmitter 2-LT-0504 and its associated three-valve manifold. These installation activities, which were procedurally governed by Startup Work Authorization SWA 81020, included the bending and fitting of the instrumentation tubing and the attachment of the sensing lines to the subject level transmitter. As a result of these direct work observations, it was determined that the tubing was properly identified; that it was installed in accordance with the governing work instructions; and that the associated materials (i.e., tubing and fittings) matched the specified installation drawing. No deficiencies were identified by the inspectors during the witnessing of these activities.

#### 9. CORRECTIVE ACTION (92720)

During this reporting period, the inspectors reviewed selected dispositioned TUE Forms to ensure adequate management controls and administrative procedures

had been implemented to effectively identify safety-related deficiencies and provide comprehensive followup action. The inspectors review concluded that the process for identification and resolution of safety-related deficiencies was being effectively implemented. No deficiencies were noted by the inspectors.

10. EXIT MEETING (30703)

An exit meeting was conducted on January 31, 1991, with the persons identified in paragraph 1 of this report. The licensee did not identify as proprietary any of the materials provided to, or reviewed by, the inspectors during this inspection. During this meeting, the inspectors summarized the scope and findings of the inspection.