U. S. NUCLEAR REGULATORY COMMISSION

OFFICE OF SPECIAL PROJECTS

NRC Inspection Report: 50-445/88-11 50-446/88-09

Permits: CPPR-126 CPPR-127

Dockets: 50-445 50-446

Category: A2

Construction Permit
Expiration Dates:
Unit 1: August 1, 1988
Unit 2: Extension request submitted.

Applicant: TU Electric
Skyway Tower
400 North Olive Street
Lock Box 81
Dallas, Texas 75201

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

Inspection At: Comanche Peak Site, Glen Rose, Texas

Inspection Conducted: February 3 through March 1, 1988

Inspection conducted by NRC consultants:

J. Dale - EG&G (paragraph 4a and d)
M. K. Graham - Parameter (paragraph 2b, 3, 4b, and 6)
P. Stanish - Parameter (paragraph 2a, 4c, and 5a-f)

Reviewed by: H H Livermore 3/22/88
H. H. Livermore, Lead Senior Inspector Date

Inspection Summary:

Inspection Conducted: February 3 through March 1, 1988 (Report 50-445/88-11; 50-446/88-09)

Areas Inspected: Unannounced, resident safety inspection of applicant's actions on previous inspection findings; follow-up on violations/deviations; Corrective Action Program (CAP) for cable tray and hangers, large bore pipe supports, conduit supports for Train C le.s than or equal to 2", and auxiliary systems HVAC; piping systems and supports; applicant's action on IE bulletins; and general plant areas (tours).

Results: Within the areas inspected, the NRC inspectors identified no significant strengths or weaknesses during this inspection. No violations or deviations were identified.

DETAILS

1. Persons Contacted

*R. P. Baker, EA Regulatory Compliance Manager, TU Electric
*J. L. Barker, Manager, EA, TU Electric
*D. N. Bize, EA Regulatory Compliance Supervisor, TU Electric
*M. R. Blevins, Manager, Technical Support, TU Electric
*J. L. Brackney, Project Manager, Records, TU Electric
*R. D. Calder, Manager Engineering Projects, TU Electric
*J. T. Conly, Lead Licensing Engineer, Stone & Webster Engineering Corporation, (SWEC)
*W. G. Counsil, Executive Vice President, TU Electric
*G. G. Davis, Nuclear Operations Inspection Report Item Coordinator, TU Electric
*R. D. Delano, Licensing Engineer, TU Electric
*D. E. Deviney, Manager, Operations QA, TU Electric
*D. P. Hall, Vice President, Illinois Power Company
*T. L. Heatherly, EA Regulatory Compliance Engineer, TU Electric
*J. J. Kelley, Manager, Plant Operations, TU Electric
*F. W. Madden, Mechanical Engineering Manager, TU Electric
*D. M. McAfee, Manager, Quality Assurance (QA) TU Electric
*J. W. Muffett, Manager of Civil Engineering, TU Electric
*L. D. Nace, Vice President, Engineering & Construction, TU Electric
*D. E. Noss, QA Issue Interface Coordinator, TU Electric
*D. M. Reynerson, Director of Construction, TU Electric
*M. J. Riggs, Plant Evaluation Manager, Operations, TU Electric
*A. B. Scott, Vice President, Nuclear Operations, TU Electric
*C. E. Scott, Manager, Startup, TU Electric
*J. C. Smith, Plant Operations Staff, TU Electric
*M. R. Steelman, CPRT, TU Electric
*P. B. Stevens, Manager, Electrical Engineering, TU Electric
*J. F. Streeter, Director, QA, TU Electric
*R. O. Taylor, Nuclear Records and Computer Services Manager, TU Electric
*C. L. Terry, Unit 1 Project Manager, TU Electric
*T. G. Tyler, Director of Projects, TU Electric
*R. D. Woodlan, Supervisor, Docket Licensing, TU Electric
*L. G. Yeager, Engineering Support Manager, TU Electric

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

*Denotes personnel present at the March 1, 1988, exit meeting.

2. Applicant Action on Previous Inspection Findings (92701)

a. (Closed) Unresolved Item (446/8602-U-23): This item was generated because the program defined for grouting of baseplates did not appear to provide positive assurance that all required grouting would be accomplished. In this inspection period, the NRC inspector reviewed Brown & Root Procedure CCP11, Revision 3, "Concrete and Grout," which requires that all baseplates within a room/area be addressed and documented on a craft bearing inspection report. Therefore, baseplate bearing will be evaluated and documented for all baseplates and grouting performed where deemed necessary. Based on the review of this procedure, the NRC inspector is satisfied that the above concern has been adequately addressed. This item is now closed.

b. (Closed) Open Item (445/8516-0-36): During an NRC witnessed inspection of Pipe Support MS1-150-033-C52K, ERC identified the following conditions to the NRC inspector as subject to evaluation as potential deviations:

(1) Component member length and location were out of tolerance.
(2) Locking devices were missing.
(3) Spherical bearing gap was out of tolerance.
(4) Safety lockwire on snubber capscrew was broken.
(5) Paint was present on spherical bearings.
(6) Welder identification was not visible on pressure boundary welds.
(7) Snubber interference with insulation was observed.

The NRC inspector verified by review of ERC deviation reports that the identified conditions had been determined to be valid deviations. These conditions were subsequently documented by the applicant on Nonconformance Report (NCR) M-23274N in accordance with applicable site procedures.

The NCR was dispositioned "scrap" due to the entire support design being voided as a part of the SWEC's piping system stress requalification. Therefore, the nonconforming conditions no longer exist. This open item is closed.

3. Follow-up on Violations/Deviations (92702)

(Open) Deviation (445/8607-D-01): TU Electric letter TXX-3657 dated April 21, 1983, submitted to NRC in accordance with 10 CFR Part 50.55(e), identified a significant condition adverse to quality (no objective evidence was available documenting acceptable weld quality on seismic arrestor brackets) and stated that the corrective actions would be to discard and replace the arrestor brackets, and that the corrective action would proceed immediately. The committed corrective actions have not been implemented and this item remains open.

The deviation was identified as a result of a NRC inspection of mechanical equipment installation (NRC Inspection Report 50-445/86-01; 50-446/86-01). The NRC inspector observed what appeared to be an unacceptable weldment on an adjacent Auxiliary Feedwater system valve, tag No. I-FV2456. A seismic arrestor bracket had been welded over the raised cast identification letters of the actuator barrel assembly and the weld exhibited incomplete fusion and overall poor workmanship.

The NRC inspector considers the bracket welding which exists on Valve 1-FV2456 to be rejectable in accordance with ASME, AWS, or other quality standards which would typically be specified in a purchase order or design specification for safety-related equipment.

In response to the Notice of Deviation, TU Electric Letter TXX-6222 dated February 18, 1987, documented that TU Electric had determined that the welding on the subject brackets was acceptable and that no corrective action on the existing installations was required. TU Electric Letter TXX-6526 dated July 1, 1987, was issued to provide further clarification of product acceptability and states, in part, "The clip material was procured by Fisher Control in accordance with their QA Program. The welding of the clips to the skirt was performed by qualified welders to qualified welding procedures, with qualified filler material and in accordance with Fisher Control QA Program (for ASME Section IX). The welds were inspected per the Fisher Control QA Program and released under the Vendor Control Program. Compliance with the requirements of the component design specification, and seismic qualification was certified by Fisher Control."

NRC letter dated September 11, 1987, requested that TU Electric clarify the statements in TU Electric's Letter TXX-6526, relative to control of bracket materials and welding by the valve manufacturer.

Fisher Control should have been aware that the purchase order was safety related, ASME Class 2 and 3 and should have detected the unacceptable seismic arrestor bracket weld quality identified by the NRC inspector. The NRC inspector has reviewed a letter from Fisher Control, VF094 dated December 3, 1987, to TU Electric which states that the welding was approved visually by Fisher's quality inspectors.

When the welding quality issue was first identified by TU Electric in 1983, in accordance with 10 CFR Part 50.55(e) TU Electric submitted a report (TXX-3657) of actions taken to correct the deficiency regarding welding of brackets on valves supplied by Fisher Control. The report states that from a product perspective, no objective evidence is available documenting acceptable weld quality and the integrity of the welds can not be assured during a seismic event. The safety analysis required by this report determined that in the event the deficiency had not been detected, failure of the bracket welds during a seismic event could result in an unpostulated line break rendering certain Class 2 and 3 safeguards systems unavailable. To correct the deficiency, the applicant committed to replace the welds in accordance with the project ASME QA program and ensure compliance with the requirements of ASME Section III, Subsection NF. Corrective actions were to proceed immediately

The NRC inspector has evaluated historical documentation pertaining to design, procurement, and fabrication of the valves and seismic arrestor brackets. NCR M-9586, Revision 0, documented the nonconforming welding which exists on Valve 1-FV-2456 and states that there is no documented evidence of the material or welding acceptability of the ASME Section III, Subsection NF, brackets.

Subsequent to the disposition of NCR M-9586, Revision 0, the applicant revised the disposition of the NCR to "use as is" (NCR M-9586, Revision 1) and closed the NCR in accordance with project procedures. The basis for the revised disposition was that the brackets were not required to be part of the ASME Section III certified system and that compliance with the requirements of the component design specification and seismic qualification was certified by Fisher Control.

Based upon a review of ASME Code requirements, the NRC inspection staff believes that TU Electric should not have downgraded the pipe support installations from ASME Section III NF to the current non-ASME Class 5 designation. Valve 1-FV-2456 is required to meet ASME Section III manufacturing requirements and the NRC believes the supports and seismic arrestor brackets should also meet ASME requirements.

The NRC inspector reviewed a packing list and other vendor supplied documentation for Valve 1-FV-2456 and noted that Fisher Control certified the valve to be in conformance with contract specifications and Section III of the ASME code. Furthermore, the certification stated that the product was free from defects in material and/or workmanship.

On February 11, 1988, NRC management and the NRC inspector met with the manager of Nuclear Licensing and the Director of Quality Assurance. During this meeting, TU Electric stated that seismic arrestor bracket fabrication requirements had not been specified to Fisher Control for 62 valves which were procured under safety-related Purchase Order CP-0600. Previous evaluations of the product acceptability performed by TU Electric were based upon what was considered to be an acceptable manufacturer's certification from Fisher Control, with the exception that TU Electric's authorized vendor inspector had accepted the welding quality for Valve 1-FV-2456 during an inspection of the valve at the vendor shop prior to shipment.

The NRC inspector has noted that, although the applicant contends that fabrication requirements for the seismic arrestor brackets may not have been clearly specified, the purchase order was safety related, for which the requirements of 10 CFR Appendix B are applicable. The seismic arrestor brackets were added to the valve actuators due to the results of Fisher Control's seismic qualification testing. Change/Deviation Request S1280 documents the need to add the seismic arrestor brackets to the valve actuators. These brackets provide an attachment point for snubbers and/or bracing required to offset the effect of seismic response and end loadings.

This deviation will remain open pending (1) receipt of the additional information requested on September 11, 1987, (2) assessment of the Fisher Control welding for generic applicability, (3) inspection of TU Electric's response, (4) inspection of TU Electric corrective actions, and (5) determination of additional enforcement if appropriate.

4. Corrective Action Program (CAP)

a. Cable Tray and Cable Tray Hangers (48053)

TU Electric has prepared a Project Status Report (PSR) for cable tray and cable tray hangers (CT/CTH). TU Electric formally submitted this information to the NRC by letter, TXX-6930, dated November 6, 1987.

The purpose of the PSR is to demonstrate that the safety-related CT/CTH in Unit 1 and common are in conformance with CPSES licensing commitments, satisfy design criteria, and will satisfactorily perform their safety-related functions.

The CT/CTH PSR describes the validation effort from the early stages of design criteria establishment through the development and implementation of the detailed design and design control procedures. The report traces the updating of design/installation specifications and construction/QC procedures, the implementation of the Post-Construction Hardware Validation Program (PCHVP) to validate the as-built CT/CTH design, and the completion of the Unit 1 and common analysis packages.

The NRC inspector performed a review of the PSR and developed an NRC inspection plan to evaluate the CAP for CT/CTH. The NRC inspection plan when implemented is intended to accomplish the following.

(1) Determine whether technical requirements have been adequately addressed in PCHVP CAP specifications and work procedures.

(2) Determine through direct observation and independent evaluation of work, whether the applicant's work control system is functioning properly.

(3) Determine whether the installation of safety-related CT/CTHs are in compliance with NRC requirements, applicable codes, and applicant's commitments.

(4) Provide assurance that the field installation of cable tray support hardware is correct and will function in a manner that will allow safe operation of the associated plant system.

This inspection plan will be implemented and reported in subsequent inspection reports.

b. <u>Large Bore Pipe Supports (50090)</u>

The NRC inspector performed inspections of large bore piping and pipe supports to ensure compliance with the applicant's response to NRC IE Bulletin 79-14. TU Electric Procedure CPPP22, clearance walkdown procedure, provides instructions to ensure piping systems are free to move within their maximum displacement in each of the three orthogonal directions as a result of dynamic forces and thermal effects. The field verification activities provide a basis for reconciling any difference between field installation of hardware and design calculations.

The NRC inspector evaluated field installed hardware associated with residual heat removal system, Design Stress Problem 1-073, which consists of the following:

Pipe Support Numbers

RH-1-014-010-S32K
RH-1-014-006-S32K
RH-1-014-00 '-S32S
RH-1-014-005-S32R
RH-1-014-004-S32R
RH-1-014-003-S32S

Piping Line Numbers

3"-RH-1-014-601R-2
3"-RH-1-012-601R-2

NRC verification of hardware included, but was not limited to:

- Pipe support identification markings.
- Concrete anchor installation.
- Component support member lengths and piping spool pieces installed within applicable tolerances.
- Correctness of material thickness identified on design drawings.
- Incorporation of all outstanding design changes onto current drawing revision.
- Clearances between pipes and adjacent components.
- Piping insulation installation.

No violations or deviations were identified.

Review of Draft Revision of NUREG-0797 Supplement 14

NUREG-0797, Supplement 14, is scheduled to be issued in March 1988. This document, which is being prepared by the Technical Programs Branch of the Office of Special Projects will provide the staff's evaluation of the applicant's corrective action program related to piping and pipe supports.

The NRC inspector has reviewed the draft revision as an aid in determining the extent of NRC field inspection requirements necessary for the site based NRC inspection staff to adequately verify implementation of the corrective action program. Verification of the applicant's corrective actions related to hardware issues; i.e., the PCHVP is the responsibility of the site based inspection staff and is being verified as a part of the NRC inspection plan developed for the large bore and small bore piping project status reports.

c. Conduit Supports C Train Less Than or Equal to 2" (48053)

For this inspection period, the NRC inspector performed a review/walkdown of the total scope of work Impell performed for Room 161A of the Unit 1 containment building and Room 213 of the auxiliary building.

Room 161A Unit 1 Containment Building

Calculation Number	Title
RCO-1-CT161A	Room Closeout Calculation/ Documentation
L2-S-1-CT-161A	Level 2-Conduit Support Evaluation
A-02607	Level 5 Support Evaluation
A-02681	Level 5 Support Evaluation
A-02799	Level 5 Support Evaluation
A-02801	Level 5 Support Evaluation
A-02809	Level 5 Support Evaluation
L6-1-CT-161A	Level 6-Train C Conduit Interaction Evaluation

While performing the review/walkdown for Room 161A, the NRC inspector found the following discrepancy:

Reviewing Calculation A-02801, Revision 1, the NRC inspector noticed that one of the dimensions used in the support evaluation for the junction box No. A-02877 was different from the data recorded by the walkdown engineer. The walkdown engineer reported the dimension in question, which locates the 1 1/2" conduit called "Line C" from the back of the junction box, as 1 3/4" (which agrees with the NRC inspectors walkdown data); however, the analyst used a dimension of 2 1/2".

Room 213 Auxiliary Building

Calculation Number	Title
L2-S-1-AUX-213	Level 2-Conduit Support Evaluation
L4-JB1-AUX-213	Level 4-Junction Box CI Box/Light Fixture Evaluation
L4-S-1-AUX-213	Level 4-Conduit Support Evaluation
A-02961	Level 5-Support Evaluation
A-03149	Level 5-Support Evaluation
A-02976	Level 5-Support Evaluation
A-02984	Level 5-Support Evaluation
A-02960	Level 5-Support Evaluation
A-02697	Level 5-Support Evaluation
A-02964	Level 5-Support Evaluation
L6-1-AB-213	Level 6-Train C Conduit Interaction Evaluation

While performing the review/walkdown for Room 213, the NRC inspector detected the following discrepancies:

(1) On page 6 of 9 of Request for Information (RFI) E5-1-0953, for Calculation A-02961, the walkdown engineer reported a dimension between the centerline of the Hilti Kwik bolts (HKB) and the centerline of the Nelson studs that attach the junction box to its left wing plate as 2". The NRC inspector measured this dimension as 1 1/2."

(2) On page 4 of 8 of RFI E5-1-0964, for Calculation A-02976, the walkdown engineer reported a dimension of 7" from the centerline of a bolted cast iron (CI) box to the support identified as NQ00680/A-02976. The NRC inspector measured this dimension at 9 1/2".

Because the discrepancies given above were detected in the same inspection period (i.e., prior to receiving a response to the previous deviations), because they are similar in nature to those reported in NRC Inspection Report (50-445/87-35; 50-446/87-26), and because they lack safety significance, these discrepancies are considered to be further examples of Deviation 445/8735-D-03 and are not being cited in this report.

The above discrepancies were discussed with Impell personnel who performed reinspections and concurred with the NRC observations. In response to these discrepancies, Impell revised their walkdown data, performed the necessary calculations and advised that there was no safety impact as a result of the discrepancies found in the above rooms.

During the NRC reviews/walkdowns of the Impell efforts on the PCHVP portion of the CAP for conduit supports Train C, 2" diameter and less, several deviations were identified. These deviations dealt with discrepancies in the reported data obtained as a result of their engineering walkdowns and isolated documentation errors. The discrepancies found represent less than one percent of the total inspection attributes in the rooms reviewed by the NRC, which is comparable to the discrepancy rate Impell reported as a result of their sample review performed in response to the deviations reported early in the NRC inspection efforts. Also, in all cases where discrepancies were found, Impell has immediately evaluated the impact on their calculations and has been able to show that there have been no safety implications. Therefore, the NRC reviews performed to date indicate that Impell efforts provide reasonable assurance that Train C conduit will not adversely impact the operation of safety-related equipment.

d. Auxiliary System, Heating Ventilating and Air-Conditioning (HVAC) (50100)

The NRC inspector performed field inspections of the hardware and equipment and documentation reviews of the following documentation packages. These packages were generated as a result of construction, engineering, and inspection activities related to HVAC CAP implementation.

Seismic Duct Hangers	Unit	Room
DH-1-778-2N-M	2	113
DH-1-778-2N-WP30	2	113
DH-1-792-1N-1DJ	1	121
DH-1-854-1N-WP4	1	150A
DH-1-854-1N-3A	1	151
DH-1-854-1N-1DB	1	151A

Construction Procedure CHV101, Revision 1, Section 6.1.3.1, states, in part, "The traveler form . . . serves to identify required work, special instructions, and references that are required for fabrication, installation, rework or repair of HVAC system components."

During the inspection of HVAC Support DH-1-854-1N-1DB the NRC inspector was unable to locate any instruction in the traveler package requesting paint removal on the 22 welds on the support; however, all the paint on the welds had been removed. TU Electric engineering was contacted and is currently trying to locate the authorization for paint removal on this support. The preceding example is being tracked as an unresolved item (445/8811-U-01).

No violations or deviations were identified.

5. Piping Systems and Supports (50090)

a. During this inspection period, the NRC inspector observed in the field that Support CC1-146-010-S43R, a rigid sway strut, was attached to a wide flange member by welds perpendicular to the longitudinal axis of the beam; and there were no stiffener plates to preclude the possibility of weld failure due to local effects in the beam. Utility personnel confirmed that this support had been through final design reconciliation and was ready for final QC acceptance. The SWEC calculation package for this support was provided to determine if the appropriate local stress calculations had been performed in accordance with the requirements of Comanche Peak Project Procedure CPPP-7, "Design Criteria for Pipe

Stress and Pipe Supports.' Review of this calculation package revealed that there had been no evaluation of flange bending due to the tensile load on the support. Subsequent to this, the NRC inspector located in the field two additional examples of supports attached to wide flange sections in a similar manner. The supports in question were CC-1-174-002-S53R and CC-1-161-002-S53R. On Support CC-174-002-S53R, the engineer evaluated web crippling; however, there was no evaluation of flange bending. On Support CC-1-161-002-S53R, flange bending was evaluated but web crippling was not addressed. Paragraph 4.7 of Attachment 4-13 of CPPP-7 depicts several examples for which local stresses should be evaluated. All the above supports correspond to Examples 4.7.1.2a, for flange bending, and the first example in paragraph 4.7.2 on web crippling. This item will remain unresolved pending Stone and Webster's review of similar support calculations (445/8811-U-02).

b. In Rooms 194 and 161A, the NRC inspector noticed that on Supports CS-2-239-405-A42K and FW1-102-002-C62K, mechanical shock arrestors, that the holes in the clamp for the load pin appeared to be excessively large. Since, according to the Design Specification 2323-MS46A, the maximum deflection under rated load is only .060", large gaps at the pin-to-clamp connection could have an adverse impact on the spring rate of the shock arrestor which is an input parameter for the piping stress analysis. Further review by the NRC inspector revealed that there are many other examples of this condition in the field, and that the same condition exists at the rear bracket connection on many shock arrestors. Also, the above conditions exist on many sway struts which utilize the same type of clamps and rear brackets. Upon notification of this condition TU Electric generated NCRs which will provide an engineering disposition of these conditions. The NCR numbers are 88-03185 and 88-03213. This item will remain an unresolved item pending NRC review of the resolution of these NCRs (445/8811-U-03).

c. In Room 161A, the NRC inspector noticed that on Support RC1-115-021-C66K, a Pacific Scientific Size 35 mechanical shock arrestor supplied by NPSI, the threaded transition kit was not torqued (preloaded) into the snubber body. This represents a condition which could allow more unrestrained movement (dead band) than the condition tested by Pacific Scientific in their qualification testing of the base unit. Since this configuration has not been tested, documentation does not exist to indicate that units assembled in this manner meet the requirements of Design Specification 2323-MS-46A, which limits total deflection to 060" when subjected to rated load. Utility personnel have reported that their vendor supplies the Pacific Scientific Sizes 35 and 100 with transition kits of this design. Because of the additional dead band caused by lack of preload, support stiffness for these units may be overstated, which may, in turn, impact the results of their piping analyses. This item will remain unresolved pending receipt of the applicant's review of this condition (445/8711-U-04).

d. During a routine inspection in Room 154, the NRC inspector noticed that on Support RH-1-001-005-C41K, a Pacific Scientific Size 10 mechanical shock arrestor, there were three different types of bolts attaching the transition kit to the arrestor body. Further review revealed that three of the bolts are ASTM-A307 (low strength steel) and one is ASTM-A-449 (high strength steel). Review of Pacific Scientific material specifications shows that Pacific uses only high strength bolting for this connection. Documentation for several other shock arrestors units was checked to determine what type of bolts were utilized on other units. This review revealed that the vendor documented that the bolts provided with the units are, in fact, ASTM-A-307. As stated above, Pacific Scientific uses high strength bolting in this application so that they can apply a preload at the connection between the transition kit and arrestor. By doing this, they are able to ensure that there will be no separation between the transition kit and arrestor body at any applied load up to the faulted design load. Lower yield strength bolts are not recommended for use in preloaded connections; also, the preloads applied by torquing these bolts result in tensile stresses which exceed code allowables. This item will remain unresolved pending receipt of design justification data from the vendor (445/8811-U-05).

e. While reviewing Brown & Root ASME construction Procedure ACP11.5, Revision 2, "Component Support Fabrication," the NRC inspector noticed what appears to be excessively high torque values for the bolts mounting transition kits or forward brackets to mechanical shock arrestors. Comparing the values given in Procedure ACP-11.5 to those recommended in Pacific Scientific document No. 141, "Instruction Manual-Installation and Maintenance," revealed that the torque values given in ACP-11.5 should have been given in inch-pounds not foot-pounds. Review of the applicant's inspection reports (IRs) for several units revealed that the torque values were specified in inch-pounds; therefore, it appears that Procedure ACP-11.5 contains a typographical error. This item will remain open pending revision to this Procedure (445/8811-0-06).

f. On February 25, 1988, NRC, TU Electric and SWEC representatives met to discuss the concerns listed above. As a result of this meeting, SWEC committed to review a representative number of their support calculation packages to determine if local stresses had been evaluated in accordance with the applicable specifications and procedures. Results of their review would be presented, along with corrective actions, as soon as the review was completed. For the remaining concerns, TU Electric committed to investigate these items further and report in a subsequent meeting. The results of that meeting will be documented in a later inspection report.

6. Applicant Actions on IE Bulletins (92703)

(Open) IEB 87-02, "Fastener Testing to Determine Conformance with Applicable Material Specifications": This Bulletin requires the applicant to review receipt inspection requirements and internal controls for fasteners, and determine, through independent testing, whether fasteners contained in warehouse inventories meet applicable specification requirements.

NRC Inspection Report 50-445/87-35; 50-446/87-26 describes activities performed by the applicant and the NRC inspector relating to selection of fastener test samples.

A detailed response, TU Electric Letter TXX-88223 dated February 11, 1988, has been submitted to the NRC for review. The NRC inspectors have noted that test results for four safety-related fasteners and five nonsafety fasteners deviate from applicable mechanical/chemical material specification requirements. The NRC inspectors are evaluating the significance of the material testing deviations and will document their findings in a subsequent inspection report.

7. Plant Tours (92706)

The NRC inspectors made frequent tours of the facility and observed such items as in-process work activities, housekeeping, and equipment protection. Protection of equipment was observed to be considerably improved.

No violations or deviations were identified.

8. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations, or deviations. Five unresolved items disclosed during the inspection are discussed in paragraphs 4.d, 5.a, 5.b, 5.c and 5.d.

9. Open Items

Open items are matters which have been discussed with the applicant, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or applicant or both. One open item disclosed during the inspection are discussed in paragraph 5.e.

10. Exit Meeting (30703)

On February 29, 1988, R. F. Warnick, H. H. Livermore, and J. S. Wiebe met with L. D. Nace and A. B. Scott to discuss February inspection findings and other matters of interest.

An exit meeting was conducted March 1, 1988, with the applicants representatives identified in paragraph 1 of this report. No written material was provided to the applicant by the inspectors during this reporting period. The applicant did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection. During this meeting, the NRC inspectors summarized the scope and findings of the inspection.