U. S. NUCLEAR REGULATORY COMMISSION

OFFICE OF SPECIAL PROJECTS

NRC Inspection Report: 50-445/87-09
50-446/87-07

Permits: CPPR-126
CPPR-127

Dockets: 50-445
50-446

Category: A2

Construction Permit
Expiration Dates:
Unit 1: August 1, 1988
Unit 2: August 1, 1987

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: Glen Rose, Texas

Inspection Conducted: May 1 through June 4, 1987

Inspectors: _____ 6/26/87
L. E. Ellershaw, Reactor Inspector Date
(paragraphs 3.a, 3.c-d, 5.a and b)

_____ 6/26/87
C. J. Hale, Reactor Inspector Date
(paragraphs 3.b, 3.e, 4, and 5.c-d)

Consultants: EG&G - J. Dale (paragraphs 3.c and d)
W. Richins (paragraph 5.a)
V. Wenczel (paragraphs 3.e and 5.d)

Parameter - J. Birmingham (paragraphs 3.b, 4 and 5.c)
K. Graham (paragraph 3.a)
D. Jew (paragraph 5.b)

Reviewed by: I. Barnes 6/26/87
I. Barnes, Senior Project Inspector Date

Inspection Summary

Inspection Conducted: May 1 through June 4, 1987 (Report 50-445/87-09; 50-446/87-07)

Areas Inspected: Nonroutine, unannounced inspection of applicant actions on previous inspection findings and Comanche Peak Response Team (CPRT) issue-specific action plans (ISAPs).

Results: No violations or deviations were identified.

## DETAILS

1. Persons Contacted

*J. L. Barker, Engineering Assurance (EA) Manager, TU Electric
*D. Bize, EA Regulatory Compliance, TU Electric
D. Boydston, Issue Cordinator, Evaluation Research Corporation (ERC)
*R. E. Camp, Unit 1 Project Manager, TU Electric
*D. Deviney, Operations Quality Assurance (QA) Manager
*P. E. Halstead, Quality Control (QC) Manager, TU Electric
*J. L. Hansel, Project Director, ERC
*B. Haynes, Comanche Peak Engineering (CPE) Electrical/I&C, TU Electric
*T. Heatherly, Regulatory Compliance Engineer, TU Electric
*G. S. Keeley, Nuclear Licensing Manager, TU Electric
*J. J. Kelley, Operations Manager, TU Electric
*J. Krechting, CPE, TU Electric
*J. C. Kuykendall, Nuclear Administration Vice President, TU Electric
*D. McAfee, QA Manager, TU Electric
J. Miller, Issues Manager, TERA
*L. D. Nace, Engineering & Construction Vice President, TU Electric
*D. Ness, QA Issue Interface Coordinator, TU Electric
G. R. Purdy, QA Manager, Brown & Root (B&R)
*D. M. Reynerson, Construction Director, TU Electric
G. W. Ross, Issue Cordinator, ERC
*A. B. Scott, Operations Vice President, TU Electric
*C. E. Scott, Startup Manager, TU Electric
*J. C. Smith, Operations Staff, TU Electric
*J. F. Streeter, QA Director, TU Electric
P. Streeter, Issue Cordinator, TERA
*C. L. Terry, Executive Assistant, TU Electric
P. Turi, Issue Coordinator, TERA
*C. W. Vincent, Issue Coordinator, ERC
*D. Woodlan, Nuclear Licensing Supervisor, TU Electric
P. Ortstadt, Issue Coordinator, ERC

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

*Denotes personnel present at the June 4, 1987, exit interview.

2. Significant Meetings (30702)

On May 18, 1987, J. G. Keppler, C. I. Grimes, R. F. Warnick, and C. C. Williams met with W. G. Counsil, J. W. Beck, L. D. Nace, and others of the applicant's staff to discuss the plant status, the NRC's May 12, 1987, request for additional information in conjunction with program plan update, and other items of mutual interest.

On May 19, 1987, J. G. Keppler, C. I. Grimes, and R. F. Warnick met with Billie Garde of Government Accountability Project to discuss her concerns and views regarding the Comanche Peak plant, the current plant status, and the NRC's May 12, 1987, request for additional information in conjunction with program plan update, and other items of mutual interest. Mrs. Juanita Ellis was scheduled to attend the meeting; however, because of illness she could not meet with the NRC.

On May 19, 1987, J. G. Keppler, C. I. Grimes, and R. F. Warnick met with M. D. Spence to discuss the plant status, the NRC's May 12, 1987, request for additional information in conjunction with program plan update, and other items of mutual interest.

On May 20, 1987, J. G. Keppler, C. I. Grimes, R. F. Warnick, H. E. Schierling, J. E. Lyons, and other Office of Special Projects (OSP) staff members met with J. W. Beck, J. L. Hansel, and E. J. Brabazon to discuss ISAP VII.c, "Construction Reinspection/Documentation Review Plan," and the Corrective Action Program.

3. Applicant Actions on Previous Inspection Findings (92701)

a. (Closed) Open Item (445/8513-O-48): While performing reinspection of pipe support SW-2-011-020-F33R, witnessed by the NRC, ERC inspection personnel identified the following conditions as subject to evaluation as potential deviations. Shims were not located properly and a minimum clearance discrepancy existed between the supported pipe and pipe support.

ERC Deviation Report (DR) I-S-LBSR-048-DR-1 was issued to document the discrepant shim location and was subsequently evaluated by Nonconformance Report (NCR) M18972, which required that the design document be revised to reflect the actual location of shims. The NRC inspector verified that the design document had been revised to reflect the actual field location of the shims.

ERC DR I-S-LBSR-048-DR-2 was issued to document the discrepant minimum clearance and was subsequently evaluated by NCR M-22008 R-1, which determined that the required minimum 1/32" clearance does exist and that the installation is in compliance with procedural requirements. The NRC inspector verified by inspection that the pipe support installation is in compliance with procedural requirements.

b. (Closed) Unresolved Item (445/8514-U-14): The results of ISAP VII.c reinspections were to provide the types of items to be assessed in ISAP VII.a.1. "Material Traceability"; however, ISAP VII.c results were providing material traceability data on steel products only.

The issue coordinator for ISAP VII.a.1 informed the NRC inspector that he had reviewed the ISAP VII.c populations and associated quality instructions (QIs) and determined that the QIs do not provide the breadth of traceability requirements necessary for this ISAP. Therefore, the ISAP VII.a.1 issue coordinator included an investigation of the TU Electric practices for maintaining traceability of electrical cable, cable tray and conduit, cable tray supports, cable splice and termination kits, and electrical and mechanical equipment. This investigation and the results have been documented by the ISAP VII.a.1 Results Report issued May 14, 1987. Inspection by the NRC of the details of the investigation will be reported in a subsequent report under NRC Reference No. 07.a.01.01. This item is closed.

c. (Closed) Open Item (445/8519-O-01): The NRC inspector found that criteria was not provided with respect to the required accuracy of measurements in obtaining red-line data per Procedure TNE-AB-CS-1. Variations in bolt projection and gage measurements were identified which appear to be attributable, in part, to the many different methods used to take measurements.

The applicant indicated that TNE-AB-CS-1 would be revised to provide a more concise and clear guide with respect to measurements.

The NRC inspector reviewed TNE-FVM-CS-001, Revision 5, (which replaced TNE-AB-CS-1) and confirmed the addition of dimensional criteria for the measurement of welds, gaps, structural shapes and configurations, and angles. Specific tolerances were also identified with respect to all obtainable measurements. These criteria were confirmed to be contained in Sections 3.2.2 and 3.9.2 of TNE-FVM-CS-001, Revision 5. This item is closed.

d. (Closed) Open Item (445/8519-O-02): It was identified that there were attributes which appeared to be accessible although they had been documented as inaccessible.

The applicant stated that the training provided to the walkdown personnel instructed that measurements be taken only if they were fully accessible at the support. Further, the training provided instruction that all

attributes of a particular component be fully accessible before it is inspected.

The applicant indicated that the term inaccessible would be clarified by a revision to TNE-AB-CS-1.

The NRC inspector examined TNE-FVM-CS-001, Revision 5, (which replaced TNE-AB-CS-1) and found that the procedure defines "inaccessible" in Section 2.4 and contains instructions for recording inaccessible or partially inaccessible items in Sections 3.2.2.A.3, 3.2.2.B.2a3, 3.2.2.B.2a6, 3.2.3.A.1f, and 3.3.C. The NRC inspector found the instructions and the sections of the procedure that address the term inaccessible to be understandable and consistent. This item is closed.

e. (Closed) Open Item (445/8615-O-02): The overview quality team (OQT) raised a concern to the senior review team (SRT) regarding ERC's practice of certifying inspection personnel prior to completion of personnel education/experience verification. The purpose of this open item was to monitor the SRT's resolution of this concern since ERC's certification practices differ from that of TU Electric.

The resolution to this item was the change to ERC's Procedure CPP-003, Revision 3, "Indoctrination, Training and Certification of Personnel" (Change Notice 3 dated June 25, 1986), to require verification of education and applicable experience prior to inspection personnel being certified to perform inspections.

The NRC inspector reviewed certification files for the four inspectors hired between June 1986 and May 1987. Evidence was in the files that each inspector's education and past experience was verified prior to certification. In addition, the NRC inspector interviewed the ERC certification administrator to determine if the verification of education and experience after certification disclosed any inspector's education and experience which did not meet certification requirements. The ERC certification administrator informed the NRC inspector that for certifications issued prior to June 25, 1986, all education and experience was verifiable. To obtain further assurance that inspectors certified prior to June 1986 had their experience and education verified, the NRC inspector reviewed 27 of the 77 inspector's certification files. All inspector files were determined to contain documentation substantiating verification of inspector education and experience.

Based on the NRC inspector's verification of the procedural change and the review of ERC's inspector certification files, it was determined that ERC inspector cerification practice is now consistent with the TU Electric program. This item is closed.

4. Follow-up on Previously Identified Deviations (92702)

(Closed) Deviation (445/8615-D-05; 446/8612-D-06): ERC review failed to identify errors and lapses in QC inspector recertifications of TU Electric inspectors.

This item pertained to lapses in electrical inspector's certifications as well as one instance of an incomplete form listing procedures for which a certification had been issued. The NRC inspector has reviewed the actions taken by ERC as well as TU Electric to document and correct the lapses in inspector certifications. The one instance of an incomplete form was corrected at the time of discovery. The NRC review of a sample of the QC inspector's file found no further inspector lapses or incomplete forms listing applicable procedures. This item is closed.

5. CPRT ISAPs (Excluding VII.c)

a. Maintenance of Air Gap Between Concrete Structures (ISAP II.c) (46055)

The following activities for ISAP II.c were reviewed by the NRC inspector during this report period:

Analyze Final As-Built Condition (NRC Reference 02.c.03.00)

The NRC inspector reviewed the following Design Change Authorizations (DCAs) referenced on Construction Operation Travelers used for final inspection of the minimum gap dimensions:

| DCA | Supporting Calculations | Minimum Gap Dimensions Specified |
|---|---|---|
| 21819, Rev.6 | *LIS-100c, Set 1, Rev.3<br>LIS-100c, Set 2, Rev.0<br>LIS-100c, Set 22, Rev.0<br>LIS-501c, Set 1, Rev.0<br>LIS-520c, Set 1, Rev.1 | Values for double wall, single wall, and basemat gaps for Unit 1 and Common structures. |

| | | |
|---|---|---|
| 24214, Rev.4 | Same as DCA 21819. | Values for double wall, single wall, and basemat gaps for Unit 2 and Common structures. |
| 31556, Rev.0 | **LIS-100c, Set 17, Rev.4 | Values for secondary walls in Units 1, 2 and Common. |

* Reviewed by TERA (third party).
**TERA reviewed Revision 3 but not Revision 4.

The NRC inspector reviewed the following Gibbs & Hill (G&H) calculations during this report period:

- LIS-100c, Set 17, Revision 4, Minimum Required Gap Between the Secondary Walls and Floors Above Them.

- LIS-520c, Set 1, Revision 1, Relative Displacement Between Reactor and Auxiliary Buildings at Elevation 916 ft.

The methodology and assumptions used were compared against the design commitments contained in Section 3.8 of the Comanche Peak FSAR. Numerical calculations were spot checked.

The NRC inspector identified several references in calculation LIS-520c, Set 1, to calculation LIS-100c, Set 22, Revision 0, where values were extracted from the latter calculation. For example, on sheet 42 of LIS-520c, Set 1, a value for "relative horizontal seismic displacement" of 0.813 inches is given with reference to sheet 39 of LIS-100c, Set 22. This value is then compared with similar values computed in LIS-520c, Set 1. The value 0.813 inches does not, however, appear on sheet 39 of LIS-100c, Set 22. At least six additional similar discrepancies were identified in LIS-520c, Set 1 by the NRC inspector.

No third-party review of calculation LIS-520c, Set 1 was completed. The NRC inspector discussed this situation with TERA personnel who stated that TERA's review of calculations related to ISAP II.c ended approximately September 1986. Calculation LIS-520c, Set 1, Revision 1 was issued October 10, 1986 (Revision 0 was issued September 5, 1986).

Stone & Webster Engineering Corporation (SWEC) is now responsible for a complete verification of the design

work in the Civil/Structural area under the SWEC Corrective Action Program. The NRC inspector talked with SWEC personnel regarding current efforts on verification of the G&H calculations related to ISAP II.c, LIS-520c, Set 1 in particular. The NRC inspector was informed that all or nearly all of the G&H calculations are being replaced by SWEC calculations projected to be completed by July 1987. Errors in several calculations including LIS-520c, Set 1, have been discovered by SWEC. These errors include problems similar to that described above. The new calculations are expected to allow generally greater minimum gap values than the G&H calculations. If this is the case, the acceptance criteria used in inspections currently underway will be conservative and valid.

The adequacy of the new SWEC calculations related to ISAP II.c and the subsequent third-party review is an open item (445/8709-O-01; 446/8707-O-01).

Documentation of Final As-Built Condition (NRC Reference 02.c.04.00)

The NRC inspector witnessed the following QC inspections of the final as-built condition of seismic gaps subsequent to debris removal and/or width modifications. The NRC inspector also verified all measurements witnessed. Inspection of gap width and condition were performed per QI-QP-11.0-16. Inspection of concrete surfaces within the gaps was performed per QI-QP-11.0-5. These inspections were documented on the following Construction Operation Travelers.

- Traveler CE87-1944-01-8903

  Secondary wall separation gap, safeguards building, Unit 1.

  The gap width, gap condition, and concrete surfaces were satisfactory. The minimum gap observed was 1". The minimum gap allowed was 1".

- Traveler CE86-1607-02-8903

  Single wall gap between safeguards building and reactor building, Unit 2.

The gap width, gap condition, and concrete surfaces were satisfactory. Except for one instance, the minimum gap observed was 7/8". The minimum allowed was 7/8". The one instance was a gap of 0" at a grounding conduit which was allowed to be in the gap by DCA-34943, Revision 0.

- Traveler CE87-1648-8924

  Base mat (single wall) separation gap between the turbine building and the electrical control building, Unit 1.

  The gap width, gap condition, and concrete surfaces were satisfactory except for small voids and embedded debris which were identified in wall A-A during this inspection. These were documented on NCR CC-87-1465. The minimum gap observed was 2 3/4", and the miminum allowed was 2 5/8".

- Traveler CE86-1611-8903

  Single wall separation gap between safeguards building and reactor building, Unit 1.

  The gap width, gap condition, and concrete surfaces were satisfactory. The minimum gap observed was 2 3/4". The minimum allowed was 2 1/4" or 2 3/4", depending on location.

- Traveler CE87-1757-02-8903

  Single wall separation gap between safeguards building and reactor building near emergency air lock, Unit 2.

  The gap width, gap condition, and concrete surfaces were satisfactory. The minimum gap observed was 1 7/8", and the minimum allowed was 1 7/8".

The minimum allowed gap dimensions were specified in three DCAs. DCA 21819, Revision 6, lists minimum gap values for double wall, single wall, and basemat gaps for Unit 1 and common structures. DCA 24214, Revision 4, lists minimum gap values for double wall, single wall, and basemat gaps for Unit 2. DCA 31556, Revision 0, lists minimum gap values for secondary walls in Units 1, 2 and Common.

The maximum gap values were specified in DCA 25562, Revision 1, (Unit 1 and Common) and DCA 24799, Revision 1

(Unit 2). The maximum allowable gap is 2" greater than the gap dimension specified on the design drawings.

The above DCAs and the supporting calculations will be reviewed as part of NRC Reference 02.c.03.00.

The NRC inspector verified that the above inspections were performed per Procedures QI-QP-11.0-16 and QI-QP-11.0-5. NRC inspections will continue during subsequent report periods.

QC inspections of double wall gaps have not yet started.

NRC inspections were not performed on other activities during this report period.

No violations or deviations were identified.

b. Installation of Main Steam Pipes (ISAP V.e) (49065)

Review NCRs and Pipe Deviation Request Forms (PDRFs) with Circumstances Similar to Steam Line (NRC Reference 05.3.09.00)

As discussed in NRC Inspection Report 50-445/86-01; 50-446/86-01, the screening of all existing mechanical/piping NCRs by the CPSES Quality Engineering (QE) Department identified 136 NCRs which were potentially related to pipe springing activities. Upon review of these 136 NCRs by the CPSES Mechanical Engineering Department, 12 were singled out as being the closest to what could potentially be considered as springing or could result in springing (i.e., flange centerlines out of location). Robert L. Cloud & Associates (RLCA), upon review of these 12 NCRs, stated that, "Construction practices at CPSES were acceptable in regards to awareness and avoidance of springing/cold springing."

These 12 NCRs were reviewed and discussed by the NRC inspector in the above mentioned inspection report.

A subsequent rescreening of all the mechanical/piping NCRs by RLCA identified, in addition to the 136 NCRs previously identified by QE, another 96 NCRs which could potentially relate to springing. This rescreening was performed by reviewing the NCR logs.

RLCA eliminated 104 of the 232 identified NCRs because it was determined by review of each NCR that they were not relevant to springing. The dispositions of the remaining 128 NCRs were individually reviewed by RLCA. It was

again concluded that the NCR process functioned adequately to identify potential springing in a piping system. No instances of significant springing were found nor was there any documented evidence indicating pipe damage. RLCA did, however, require that the loads for the nozzles identified in NCR M-2333 be evaluated and reviewed. This NCR dealt with 60 cases in which pipe had been supported by equipment nozzles, thereby causing indeterminate stresses on the equipment nozzles. TERA performed an analytical evaluation of the appropriate nozzles along with a visual inspection of all the nozzles for apparent damage. Based upon this evaluation, it was concluded that no damage to the nozzles had occurred.

The NRC inspector evaluated the engineering disposition of 20 NCRs from the 128 NCRs that RLCA reviewed. In no instance was there any indication that uncontrolled springing of piping had occurred. The NRC inspector also performed a specific review of TERA's evaluation for the nozzle loads associated with NCR M-2333. This evaluation, which resulted from RLCA's recommendation, was performed subsequent to the issuance of Revision 2 of the RLCA stress report. There were 29 analyses performed.

To assess the adequacy of the TERA's actions on this activity, the NRC inspector performed the following:

(1) Visual examination of 10 equipment nozzles included within the scope of NCR M-2333 and a comparison of the inspection findings to those of TERA.

(2) Review of five finite element computer analyses generated by TERA to assess equipment nozzle loads and pipe stress. The NRC inspector's review included checking for accuracy, correctness, and validity of assumptions and conclusions.

(3) Review of the five instances where no analysis was performed because TERA determined there would be no detrimental effects on the nozzles based upon the piping layout. This was to assess the third-party decision making process.

The NRC inspector performed visual examinations of the following nozzles:

| Equipment | Line |
|---|---|
| *TBX-CSAPBA-01 | 2"-CS-2-224-151-3 |
| *TBX-GHAPCP-02 | 1"-GH-X-041-152R-3 |
| *CPI-MEATAR-03 | 1 1/2"-DO-1-103-602-3 |
| *CPI-CTAPCS-04 | 10"-CT-1-012-301R-2 |
| *TBX-CSAPPD-01 | 4"-CS-1-241-151R-2 |
| **TBX-BREVRE-01 | 6"-CC-X-006-152-3 |
| **CP2-CCAPCC-02 | 24"-CC-2-050-152-3 |
| **TBX-CSAPCH-01 | 1 1/2"-SW-1-910-150-3 |
| **CPX-VAACR-03 | 3"-CC-1-140-152-3 |
| **TBX-BREVRE-01 | 4"-CC-X-034-152-3 |

* Denotes those cases where the NRC inspector also reviewed equipment nozzle load computer analysis.

** Denotes those cases reviewed by the NRC inspector where the third party determined no analysis was required.

The inspections were performed to the criteria established by TERA and revealed no indications of possible equipment nozzle damage. TERA's findings were consistent with the NRC inspector's findings.

After review of five computer analyses performed by TERA to assess nozzle loads, the NRC inspector concluded that they were correct and complete. The computer input data had correlated with the applicable piping isometric information and the necessary data was correctly extracted from the computer output. The NRC inspector concurred with the engineering judgement used in assessing the nozzle loads. That, in conjunction with the visual inspections, led to the conclusion that no damage had occurred to the nozzles.

Based on the NRC inspector's review of the other five equipment nozzle cases he concluded that TERA used correct and sound engineering judgement as the bases for determining that no computer analysis would be required. In all cases, it was apparent that very small loads would be induced, thus precluding the need for further evaluation.

This activity is complete.

No violations or deviations were identified.

c. Nonconformance and Corrective Action Systems (ISAP VII.a.2) (35061)

During this report period, NRC Reference activities 7.a.2.10 and 7.a.2.11 were inspected as follows:

Evaluation of the 50.55(e) Reporting System (NRC Reference 7.a.02.10)

The ISAP required that ERC perform an evaluation of those procedures that control the TU Electric system for evaluating and reporting deficiencies per 10 CFR Part 50.55(e) against the criteria found in paragraph 4.1.3.1 of the ISAP. The NRC inspector found that ERC had developed these criteria into a checklist for review of the controlling procedures. NRC review of this checklist found that it included the following:

- Provision of evaluating each nonconforming condition for reportability.
- Checklist for determining reportability.
- Reportability checklist addressed:
  - Significant breakdown in the QA Program.
  - Significant deficiency in design documents as released for construction.
  - Design documents released for construction do not meet the requirements of the FSAR or construction permit.
  - Nonconformance is a deficiency in construction.
  - Nonconformance is a deviation from performance specifications.
- Provision for documenting the evaluations.
- Provision for reporting each significant deficiency to the Nuclear Regulatory Commission (NRC) Inspection and Enforcement Regional Office within 24 hours after determination of the significant deficiency.
- Provision for submitting a written report on the reportable deficiency within 30 days to the NRC Regional Office with copies sent to the Director of Inspection and Enforcement, U.S. NRC. The report

shall include a description of the deficiency, an analysis of the safety implications and the corrective action taken, and sufficient information to permit analysis and evaluation of the deficiency and of the corrective action. If sufficient information is not available for a definitive report to be submitted within 30 days, an interim report containing all available information shall be filed, together with a statement as to when a complete report will be filed.

- Provision for remedial action of the significant deficiency.

The NRC inspector compared the attributes to the requirements of 10 CFR 50.55(e) and determined that the checklist provided a proper basis to evaluate the procedures for compliance with 10 CFR 50.55(e).

The NRC reviewed the results of the ERC evaluation of the following procedures:

| Procedure | Effective Time |
|---|---|
| QA Plan, Sec. 2.9, Revisions 0-4, "Quality Assurance Deviation Administration/Quality Assurance Nonconformance Administration" | Project Inception to November 1978. |
| CP-QP-16.1, "Significant Construction Deficiencies" (all revisions) | November 1978 to November 1985. |
| NEO-CS-1, Revision 0, "Evaluation and Reporting of Items/Events under 10 CFR 21 and 10 CFR 50.55(e)" | November 1985 to present. |

The NRC found by review of the site lists of current and historical procedures and by discussion with site personnel that the above procedures controlled the reporting of deficient conditions under 10 CFR 50.55(e) from the plant's inception to the present.

The NRC inspector reviewed these procedures to the criteria of the ERC checklist. Comparison of the NRC review results to the ERC review results showed that ERC had properly identified that some revisions of CP-QP-16.1

and the QA Plan lacked details for compliance with 10 CFR 50.55(e) such as, (1) providing a requirement to verbally notify the NRC within 24 hours of determining that a condition was reportable; and (2) providing a requirement to notify the NRC in writing within 30 days of determining that a condition was reportable.

NRC review of the current site Procedure NEO CS-1, Revision 1, dated November 13, 1986, found that it was in compliance with the requirements of 10 CFR 50.55(e) for the following areas:

(1) Requiring that all nonconforming conditions be evaluated for reportability per the criteria of 10 CFR 50.55(e).

(2) Identifying the responsibilities of personnel to perform and document the evaluation.

(3) Specifying that reportable deficiencies be verbally reported to the NRC regional office within 24 hours, and a written report to follow within 30 days.

The NRC review found that NEO CS-1 provides for up to 30 days of evaluation to determine the reportability of the deficiency prior to reporting the nonconforming condition. ERC, in conducting their review, also noted the same provision and recommended (QA/QC-PDR-51) that the 30 days should be reduced. This Program Deviation Report (PDR) was subsequently voided. The NRC believes that the 30 day provision should be reduced and finds that the reportability of most deficiencies, with the exception of those that require extensive engineering input or analyses can be determined within 24 hours. This matter has been discussed with TU Electric. In addition, the NRC is concerned with the time between the identification of a nonconforming condition and the start of the 30-day reporting provision of NEO-CS-1. An example of the NRC's concern has been documented as unresolved item 445/8703-U-01; 446/8703-U-01 and as violation 445/8707-V-01; 446/8706-V-01. This inspection will be continued and will be documented in a subsequent report.

No additional concerns were noted for this activity.

Review of 50.55(e) Implementation (NRC Reference 07.a.(2.11)

The ISAP required that ERC perform a review of past implementation of TU Electric 50.55(e) reporting against controlling policy or procedure. The NRC reviewed the

listing of 50.55(e) evaluations provided to ERC from TU Electric logs. The NRC found that the logs spanned the time from January 1976 to February 1986 and that ERC had selected additional evaluations from the March, April, and May 1986 time period. The ERC selection was found to represent a cross section of time and to be in three categories (A, B and C).

In Category A, ERC reviewed ten evaluations which were reported to the NRC and closed by the NRC in an NRC inspection report. The NRC inspector found these to include at least one evaluation from each year, 1976 - 1984.

In Category B, ERC reviewed 16 evaluations which were reported to the NRC, but had not been closed by the NRC. These evaluations were from 1979 through 1986. Evaluations from 1981 were not included as they had all been closed.

In Category C, ERC selected and reviewed 35 evaluations that were determined by TU Electric to be not reportable. This category was to assess TU Electric's determination that the item was not reportable.

The NRC inspector reviewed the following Significant Deficiency Analysis Reports (SDARs) to provide a basis for evaluating the accuracy and effectiveness of the ERC review results.

Category A - SDARs reported to the NRC and closed:

SDAR-CP-83-03

Category B - SDARs reported to the NRC but still open:

SDAR-CP-79-08
SDAR-CP-80-10
SDAR-CP-82-07
SDAR-CP-84-08
SDAR-CP-86-03

Category C - SDARs determined to be not reportable:

SDAR-CP-80-08
SDAR-CP-82-03
SDAR-CP-86-08
SDAR-CP-86-20
SDAR-CP-86-23
SDAR-CP-86-33

One additional SDAR not in the ERC review was also reviewed by the NRC.

SDAR-CP-82-01

The NRC inspector's review of these SDARs was conducted utilizing the same checklists ERC had used. The ERC checklist, "Reporting Significant Design and Construction Deficiencies and Defects or Non-Compliances in Components Attribute Checklist," Revision 1, was used for review of those SDARs prepared in accordance with Nuclear Engineering and Operations Procedure NEO-CS-1 effective from November 1, 1985. ERC checklist, "Reporting Significant Design and Construction Deficiencies Attribute Checklist," Revision 1, was used for review of those SDARs or evaluations prepared in accordance with earlier TU Electric procedures.

The results of the NRC review found deficiencies in the SDAR implementation; such as, interim reports being provided later than the 30 day allowance, time of discovery of a deficiency not recorded, notifications of potential reportability to the NRC resident inspector instead of the NRC Regional Office as required by 10 CFR 50.55(e), the name of the individual identifying the deficiency not recorded, and follow-up notifications to the NRC that an item has been determined not reportable provided without accompanying justification. The deficiencies were found primarily in evaluations written prior to TU Electric implementation of the current 10 CFR Part 50.55(e) reporting procedure (NEO-CS-1). These same deficiencies were found to be noted in the ERC results. The deviations noted above are considered to have been identified by the applicant and, in accordance with NRC Enforcement Policy, will not be cited. ERC evaluation of the results and any recommended actions will be provided in the ISAP VII.a.2 Results Report and will be evaluated by the NRC when issued.

No other NRC violations or deviations were noted during this inspection. No further NRC inspection of this activity is planned.

d. Guidelines for Administration of Exit Interviews (ISAP VII.a.6) (92720)

Activities inspected during this report period follows:

Implementation of SAFETEAM Checklists (NRC Reference 07.a.06.03)

The NRC inspector assessed the implementation of the two checklists used by ERC to evaluate the SAFETEAM's exit interview program.

(1) SAFETEAM Program Checklist - The purpose of the NRC inspector's assessment was to determine that checklist elements were completed during ERC's review of the SAFETEAM's program. Documented requirements and commitments for the SAFETEAM's exit interview program were described in the SAFETEAM Operational Manual; UTS (Utility Technical Services, Inc.) SAFETEAM Handbook; and the SAFETEAM Service Agreement with TU Electric (P.O. CTF-21804 dated December 11, 1984). ERC compared these documents against their program checklist for compliance. In reviewing the checklist, the NRC inspector determined each of the 24 checklist elements were answered by ERC with references given to the source documents containing the requirement or commitment. The NRC inspector verified that each reference contained the stated requirement and/or commitment.

(2) SAFETEAM Program Implementation Checklist - This checklist was used by ERC to evaluate the implementation of the SAFETEAM's exit interview program. To complete the checklist, ERC compared the 37 checklist elements to documentation which provided information and evidence of the SAFETEAM's program implementation. These documents were: SAFETEAM computer generated reports that track, status, and provide statistical data for concerns received and processed by SAFETEAM; personnel training records; and documentation files for 101 of 948 concerns received during 1985.

As with the program checklist, the NRC inspector reviewed all 37 elements of the implementation checklist and determined that each had been completed. Thirteen elements addressed general topics such as personnel training and administrative controls to receive, process, track, status, and report concerns. Twenty-four elements were specific to concern processing. The 13 general checklist elements were completed by ERC with references to computer generated reports and training documentation. Each of these references were verified by the NRC inspector to provide evidence of acceptable program implementation.

The 24 elements specific to SAFETEAM receipt and processing of concerns were completed based on ERC's collective review of 101 of 948 concern documentation files. The NRC inspector selected and reviewed 23 of the 101 concern documentation files against the 24 checklist elements using the same review techniques used by ERC. This review sample performed by the NRC inspector produced results consistent with those produced by the ERC review.

Based on the foregoing review, the NRC inspector determined the implementation checklist elements were completed as committed.

No violations or deviations were identified during this area of the inspection.

6. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. Open items disclosed during the inspection are discussed in Paragraph 5.a.

7. Exit Interview (30703)

An exit interview was conducted June 4, 1987, with the applicant's representatives identified in paragraph 1 of this enclosure. During this interview, the NRC inspectors summarized the scope and findings of the inspection. The applicant acknowledged the findings. During the exit meeting, Mr. Warnick expressed his concern over the timeliness of the applicant's determination of reportability under 10 CFR 50.55(e), the control of system cleanliness during construction and prior to the time that the system is under the control of operations, and with the applicant's re-review of all NCRs. Meetings are being scheduled to pursue the first two items. Regarding the third item, the applicant indicated that although all NCRs are not being re-reviewed by SWEC, other actions have been or are being taken to constitute a similar re-review for the other NCRs. Mr. Warnick indicated his desire to understand the total scope of work that was meant by the applicant's statement that all NCRs were being re-reviewed.

NRC Form 766 (11-81) IE MC 0535

U.S. NUCLEAR REGULATORY COMMISSION

# INSPECTOR'S REPORT

Office of Inspection and Enforcement

PRINCIPAL INSPECTOR (Name: last, first, and middle initial): Barnes, Ian

REVIEWER: R F Warnick

INSPECTORS: I. Barnes, C J Hale, L E Ellershaw

LICENSEE/VENDOR: TU Electric

TRANSACTION TYPE: X I – INSERT; M – MODIFY; D – DELETE; R – REPLACE

DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits): 05000445; 05000446

REPORT NO: 8709; 8709

SEQ: A; B; C; D

NEXT INSPEC. DATE: MO. / YR.

PERIOD OF INVESTIGATION/INSPECTION: FROM MO. 05 DAY 18 YR. 87; TO MO. 06 DAY 04 YR. 87

INSPECTION PERFORMED BY: 1 – REGIONAL OFFICE STAFF; 2 – RESIDENT INSPECTOR; 3 – PERFORMANCE APPRAISAL TEAM; 4 OTHER

ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY (See IEMC 0530 "Manpower Reporting—Weekly Manpower Reporting" for code.): REGION / DIVISION / BRANCH

REGIONAL ACTION (Check one box only): 1 – NRC FORM 591; 2 – REGIONAL OFFICE LETTER

TYPE OF ACTIVITY CONDUCTED (Check one box only): X 02 – SAFETY; 03 – INCIDENT; 04 – ENFORCEMENT; 05 – MGMT. AUDIT; 06 – MGMT. VISIT; 07 – SPECIAL; 08 – VENDOR; 09 – MAT. ACCT.; 10 – PLANT SEC.; 11 – INVENT. VER.; 12 – SHIPMENT/EXPORT; 13 – IMPORT; 14 – INQUIRY; 15 – INVESTIGATION

INSPECTION/INVESTIGATION FINDINGS (Check one box only): A X; B X; C; D; 1 – CLEAR; 2 – VIOLATION; 3 – DEVIATION; 4 – VIOLATION & DEVIATION

TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS: A 00; B 00; C; D

ENFORCEMENT CONFERENCE HELD: A; B; C; D; 1 – YES

REPORT CONTAIN 2.790 INFORMATION: A; B; C; D; 1 – YES

LETTER OR REPORT TRANSMITTAL DATE: NRC FORM 591 OR REG. LETTER ISSUED (MO. / DAY / YR.); REPORT SENT TO HQ. FOR ACTION (MO. / DAY / YR.)

## MODULE INFORMATION

| REC ORD TYPE | MODULE NUMBER INSP. NUMBER | PHASE | MANUAL CHAPTER | PROCEDURE NUMBER | LEVEL | SEQ # | PRIORITY | DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION | PERCENTAGE COMPLETED TO DATE | STATUS | MODULE REQ. FOLLOWUP PHASE | MANUAL CHAPTER | PROCEDURE NUMBER | LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | 01 | 2 | 30703 | | | A | | 010 | | | | | | |
| | | | | | | B | | 003 | | | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |
| B | 02 | 2 | 92011 | | | A | | 305 | | | | | | |
| | | | | | | B | | 153 | | | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |
| B | 03 | 2 | 42021 | | | A | | 083 | | | | | | |
| | | | | | | B | | 083 | | | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |
| B | 04 | 2 | 46055 | | | A | | 085 | 100 | P | | | | |
| | | | | | | B | | 085 | 100 | P | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |

| REC ORD TYPE | MODULE NUMBER INSP. NUMBER | PHASE | MANUAL CHAPTER | PROCEDURE NUMBER | LEVEL | SEQ # | PRIORITY | DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION | PERCENTAGE COMPLETED TO DATE | STATUS | MODULE REQ. FOLLOWUP PHASE | MANUAL CHAPTER | PROCEDURE NUMBER | LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | 05 | 2 | 49065 | | | A | | 020 | 100 | P | | | | |
| | | | | | | B | | 020 | 100 | P | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |
| B | 06 | 2 | 92720 | | | A | | 052 | | | | | | |
| | | | | | | B | | 052 | | | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |
| B | 07 | 2 | 35961 | 1 | | A | | 157 | 025 | | | | | |
| | | | | | | B | | 157 | 025 | | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |
| B | PA | 2 | 30702 | 1 | | A | | 016 | | | | | | |
| | | | | | | B | | 016 | | | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |

* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION

NRC FORM 998 (11-81) IE MC 0535

U.S. NUCLEAR REGULATORY COMMISSION

# INSPECTOR'S REPORT

## Office of Inspection and Enforcement

PRINCIPAL INSPECTOR (Name, last, first, and middle initial): Barnes, Tom

REVIEWER:

INSPECTORS:

LICENSEE/VENDOR: TU Electric

TRANSACTION TYPE: I – INSERT; M – MODIFY; D – DELETE; R – REPLACE

DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits): 05000445, 05000446

REPORT NO.: 289, 707

REPORT SEQ.: A, B, C, D

NEXT INSPEC. DATE: MO. / YR.

PERIOD OF INVESTIGATION/INSPECTION: FROM (MO. DAY YR.) TO (MO. DAY YR.)

INSPECTION PERFORMED BY: 1 – REGIONAL OFFICE STAFF; 2 – RESIDENT INSPECTOR; 3 – PERFORMANCE APPRAISAL TEAM; OTHER

ORGANIZATION CODE (IF REGION/HQ CONDUCTING ACTIVITY (See IEMC 0530 "Manpower Reporting – Weekly Manpower Reporting" for code.)): REGION / DIVISION / BRANCH

REGIONAL ACTION (Check one box only): 1 – NRC FORM 591; 2 – REGIONAL OFFICE LETTER

TYPE OF ACTIVITY CONDUCTED (Check one box only): 02 – SAFETY; 03 – INCIDENT; 04 – ENFORCEMENT; 05 – MGMT. AUDIT; 06 – MGMT. VISIT; 07 – SPECIAL; 08 – VENDOR; 09 – MAT. ACCT.; 10 – PLANT SEC.; 11 – INVENT. VER.; 12 – SHIPMENT/EXPORT; 13 – IMPORT; 14 – INQUIRY; 15 – INVESTIGATION

INSPECTION/INVESTIGATION FINDINGS (Check one box only): 1 – CLEAR; 2 – VIOLATION; 3 – DEVIATION; 4 – VIOLATION & DEVIATION

| A | B | C | D |
|---|---|---|---|
| X | X | | |

TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS

| A | B | C | D |
|---|---|---|---|
| 0 | 0 | 0 | 0 |

ENFORCEMENT CONFERENCE HELD: A B C D; 1 – YES

REPORT CONTAIN 2.790 INFORMATION: A B C D; 1 – YES

LETTER OR REPORT TRANSMITTAL DATE: NRC FORM 591 OR REG. LETTER ISSUED (MO. DAY YR.); REPORT SENT TO HQ. FOR ACTION (MO. DAY YR.)

MODULE INFORMATION

| REC ORD TYPE | MODULE NUMBER INSP. NUMBER | PHASE | MANUAL CHAPTER | PROCEDURE NUMBER | LEVEL | SEQ # | PRIORITY | DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION | PERCENTAGE COMPLETED TO DATE | STATUS | MODULE REQ. FOLLOWUP PHASE | MANUAL CHAPTER | PROCEDURE NUMBER | LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | 92927 | 0 | 5 | T | | A | | 130 | | | | | | |
| | | | | | | B | | 060 | | | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |
| B | 10 92 | 5 | 01 | 09 | 01 | A | | 066 | 100 | P | | | | |
| | | | | | | B | | | | | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |
| B | 11 2 | 5 | 01 | 09 | | A | | 119 | 100 | P | | | | |
| | | | | | | B | | | | | | | | |
| | | | | | | C | | | | | | | | |
| | | | | | | D | | | | | | | | |
| B | 12 2 | 3 | 7 | 05 | 11 | A | | 007 | 100 | P | | | | |
| | | | | | | B | | | | | | | | |
| | | | | | | C | | | | | | | | |
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MODULE INFORMATION

| REC ORD TYPE | MODULE NUMBER INSP. NUMBER | PHASE | MANUAL CHAPTER | PROCEDURE NUMBER | LEVEL | SEQ # | PRIORITY | DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION | PERCENTAGE COMPLETED TO DATE | STATUS | MODULE REQ. FOLLOWUP PHASE | MANUAL CHAPTER | PROCEDURE NUMBER | LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | | | | | | A | | | | | | | | |
| | | | | | | B | | | | | | | | |
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| B | | | | | | A | | | | | | | | |
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| B | | | | | | A | | | | | | | | |
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| B | | | | | | A | | | | | | | | |
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| | | | | | | D | | | | | | | | |

* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION