TU ELECTRIC

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C. Lance Terry
Group Vice President

February 7, 1997

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
RESPONSE TO REQUEST FOR INFORMATION PURSUANT TO 10CFR50.54(f)
REGARDING ADEQUACY AND AVAILABILITY OF DESIGN BASES INFORMATION

REF: NRC letter from Mr. James M. Taylor to Mr. Erle A. Nye dated October 9, 1996.

The referenced letter requested information pursuant to 10CFR50.54(f) to provide the NRC added confidence and assurance that CPSES Units 1 and 2 are operated and maintained within their design bases and identified deviations are reconciled in a timely manner. Attachment 1 is the required affidavit. The requested information is provided in Attachment 2 to this letter.

TU Electric has a long standing and ongoing commitment to maintain the operation and configuration of CPSES consistent with the design bases. Prior to issuance of the operating licenses for CPSES, TU Electric performed a comprehensive verification and validation of the design and construction of CPSES that provided reasonable assurance of conformance with the design bases. These verification and validation activities included the following:

o Comanche Peak Response Team (CPRT) Program - The CPRT Program included provisions to verify the design and construction of CPSES Units 1 and 2, including a construction reinspection and documentation review to provide confidence in the quality of construction.

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- o Corrective Action Program (CAP) - CAP provided a validation of the design and construction of CPSES Unit 1 and resolved the findings of the CPRT. The CAP included preparation of Design Basis Documents (DBDs), review of design documents to ensure their consistency with the DBDs, and validation of the consistency of hardware with the design.

- o Assurance Programs - The CAP was subject to overviews by the CPRT, technical audits under the Technical Audit Program (TAP), and assessments under the Engineering Functional Evaluation (EFE) program to provide additional levels of confidence that the design validation activities of the CAP were conducted effectively.

- o Unit 2 Programs - For Unit 2, TU Electric also conducted verification and validation activities to establish appropriate confidence in the quality of construction and design bases compliance.

In total, these validation and verification activities provided reasonable assurance that the validated design of CPSES conformed with the design bases and that the validated as-built plant conformed with the validated design prior to the issuance of the CPSES operating licenses in 1990 and 1993.

Additional confirmation that CPSES was configured consistent with design bases requirements at the time of licensing is provided by the pre-operational and startup testing programs. These programs were performed using test procedures prepared as required by the Final Safety Analysis Report and containing performance and acceptance criteria based in part on design bases information. Conduct of these programs was subjected to extensive line, quality organization, and NRC overview. The test programs were successfully completed for both units. While some discrepancies were identified during the conduct of these programs, these discrepancies were documented, evaluated, and dispositioned consistent with the requirements of the corrective action programs in place at the time.

As described in Attachment 2, activities subsequent to licensing which could impact compliance with the design bases, including operations, maintenance, testing, procedure and program changes, and design changes have been and continue to be controlled by mutually complementing procedures. These procedures were created in accordance with regulatory requirements, including those of 10CFR50 Appendix B, and structured so as to provide reasonable assurance of compliance. Continuous identification and tracking of regulatory commitments and FSAR maintenance activities provides reasonable assurance design bases information remains current and facilitates maintenance of procedures and programs consistent with the design bases.

Overview of activities which could impact design bases compliance is provided by both line management and independent overview organizations. In-line overview is provided by management reviews, routine testing activities, verification activities, structured internal evaluation processes, and periodic self assessments. Independent overview is provided by structured periodic audits, inspections, evaluations, and assessments of all major functional areas and activities as prescribed by 10CFR50 Appendix B, and by "vertical slice" type evaluations of selected systems.

Results of the overview activities, in-line and independent, confirm that programs structured to maintain design bases compliance are functioning reliably. Deviations have been identified and processed through the 10CFR50 Appendix B corrective action program. As part of this program, deficiencies are required to be examined for cause(s) and generic implication(s). Corrective actions are required to be formulated to address the specific deficiency, its cause(s), and generic implication(s). The general absence of repetitive events demonstrates the effectiveness of the corrective action program.

Collectively, our programs and overview thereof provide reasonable assurance of continued compatibility between CPSES operation and configuration and its design bases.

Because of the efforts undertaken prior to initial licensing of CPSES Unit 1 and Unit 2 to verify compliance with the design bases and capture implementing information in a form amenable to maintaining continued compliance, and the results of the various overview activities which provide reasonable assurance of continuing compliance, additional formal design review or reconstitution programs have been judged unnecessary. As described in Attachment 2, a number of structured vertical slice self assessments have been performed by our Nuclear Overview Department. Activities of this type continue to be implemented as a part of existing programs and are being used to assess continuing design bases compliance.

The information contained in Attachment 2 is responsive to your request. This response contains descriptive information about various historical and current CPSES programs and processes. To facilitate implementation of improvements to the current CPSES programs and processes, it is intended that these descriptions not be considered commitments, but rather as "snapshots" of the programs and processes which are used to support conclusions on compliance with the design bases.

If you have any questions regarding this matter, please contact myself or W. G. Guldemond at (817) 897-8739.

Sincerely,

C. L. Terry

GLM/clc

Attachments: 1. Affidavit
2. Requested 10CFR50.54(f) Information

c - Mr. J. Dyer, Region IV
Mr. J. I. Tapia, Region IV
Mr. T. J. Polich, NRR
Resident Inspectors, (CPSES)

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Texas Utilities Electric Company	)	Docket Nos. 50-445
	)	50-446
(Comanche Peak Steam Electric	)	License Nos. NPF-87
Station, Units 1 & 2)	)	NPF-89

AFFIDAVIT

C. L. Terry being duly sworn, hereby deposes and says that he is Group Vice President, Nuclear Production for TU Electric, the licensee herein; that he is duly authorized to sign and file with the Nuclear Regulatory Commission this response to the Request for Information Pursuant to 10CFR50.54(f); that he is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge, information and belief.

C L Terry

C. L. Terry
Group Vice President, Nuclear Production

STATE OF TEXAS)
)
COUNTY OF Somervell)

Subscribed and sworn to before me, a Notary Public, on this 7th day of February, 1997.

Susan C Gravatt
Notary Public

SUSAN C. GRAVATT
NOTARY PUBLIC
STATE OF TEXAS
Commission Expires 3-24-97

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I. Purpose

The purpose of this letter is to supply information requested by the NRC pursuant to 10 CFR 50.54(f) providing added confidence and assurance that Comanche Peak Steam Electric Station (CPSES) is operated and maintained within its design bases and that identified deviations are reconciled in a timely manner.

II. Background

TU Electric understands that configuring, operating, and maintaining CPSES in accordance with its design bases is a key element in assuring public health and safety. To this end, TU Electric has a long-standing and continuing commitment to maintaining compliance with the design bases.

CPSES Units 1 and 2 were licensed on April 17, 1990, and April 6, 1993, respectively. TU Electric spent significant resources to accurately document and verify compliance with the CPSES design bases during construction and licensing of both Units 1 and 2. The first of these efforts was the Comanche Peak Response Team (CPRT) formed to address issues identified by the NRC Technical Review Team (TRT). The CPRT effort, performed by third parties with no prior involvement in the activities they reviewed, included the Design Adequacy Program (DAP); Issue Specific Action Plans (ISAPs) to evaluate design, construction, testing, and quality assurance issues, including a comprehensive evaluation of the quality of construction; and overviews of corrective actions. The ISAPs were performed on a sample basis sufficient to provide confidence in the quality of construction of items in a construction category (e.g., cable trays, structural steel, conduit, etc.).

The CPRT effort led to the Corrective Action Program (CAP) performed by engineering contractors. The CAP included the Design Validation Program and the Post Construction Hardware Validation Program (PCHVP) both of which focused on safety-related structures, systems and components (SSCs) and selected nonsafety-related SSCs.

The Design Validation Program involved:

1) Identification of design-related licensing requirements and commitments for CPSES.

2) Continued development of Design Basis Documents (DBDs) capturing identified design-related licensing requirements and commitments.

3) Review of design calculations, drawings, and specifications to ensure their consistency with the DBDs, or development of new or revised design documents in accordance with the DBDs.

4) Resolution of any discrepancies between the design and the as-built plant identified as a result of the verification activities contained in the PCHVP as described below.

5) Based upon this resolution, development of final validated design documents.

The purpose of the PCHVP was to validate that the as-built plant conformed with the validated specifications and drawings. The PCHVP consisted of the following steps:

1) Development of an Attribute Matrix which identified inspection requirements for each attribute based upon the validated specifications and drawings.

2) Physical validation by either Quality Control (QC) inspection or engineering walkdown of those accessible attributes that: a) CPRT recommended for reinspection because of a construction deficiency or other reasons, b) were the subject of a change to the design or acceptance criteria during design validation, or c) were the subject of new work or a modification.

3) Engineering evaluations were used to verify the acceptability of the remaining attributes based upon the results of the CPRT investigations as well as other available documentation. Engineering evaluations were also used to curtail physical validations of attributes if sufficient confirmatory evidence had been collected to provide a basis for determining the acceptability of the attribute.

Overview of CAP activities was provided by TU Electric through a combination of audits and surveillances performed by the Quality Assurance (QA) and Engineering Assurance groups at CPSES, and overview by the CPRT and the Technical Audit Program (TAP) and Engineering Functional Evaluation (EFE) programs.

The purpose of TAP was to provide reasonable assurance of the technical and programmatic effectiveness of the CAP design and hardware validation activities and to provide overview of CAP activities in response to recommendations from the CPRT. TAP consisted of technical audits performed by auditors and technical specialists. TAP included reviews of the adequacy of the DBDs, adequacy of validated design documents, and acceptability of installations in accordance with validated design requirements.

The primary purpose of the EFE was to provide additional levels of confidence that the design validation activities of the TU Electric CAP were conducted effectively. The principle object was accomplished by module 1 of the EFE program. Module 1 was conducted by senior engineers and specialists who had no previous involvement with the CPSES activities they reviewed. Module 1 provided an independent evaluation of the adequacy of the CPSES design validation and Post Construction Hardware Validation Program.

The remaining objectives of the EFE program were to address the utilization of design data during testing (module 2), utilization of design data during maintenance and operations (module 3), and control of design activities during operations (module 4). Because these modules addressed testing, maintenance, and operational activities and were also subject to the oversight of the TU Electric Quality Assurance Plan, the NRC approved those activities to be integrated into the ongoing CPSES Project activities. Review plans for modules 2, 3, and 4 were provided to and are implemented through the TU Electric Quality Assurance Department. Additionally, the review criteria for Module 4 was provided to the TU Electric Engineering Assurance Section for review and consideration during the preparation of the procedures for the overall site integration of the design control program for operations. The procedures included, but were not limited to, procedures such as those controlling change identification and evaluation, conceptual design, detailed design, installation and testing requirements, field change system, nonconformance system, temporary and permanent facility modifications, design criteria, drawings, calculations, specifications, environmental qualification, ASME, special processes, corrective action systems, procurement activities, vendor drawings and documents, design verification, Station Operations Review Committee (SORC), Independent Safety Engineering Group (ISEG), and safety evaluations.

The results of the CPRT, TAP, and EFE programs provided additional assurance for CPSES Unit 1 that the CAP was properly implemented, and that the as-built plant conformed with the design bases.

For Unit 2, TU Electric conducted similar verification and validation activities. The ISAPs performed by the CPRT were applicable to both units. Additionally, as discussed in a report provided to the NRC entitled "Validation Efforts for CPSES Unit 2" (April 1992), TU Electric conducted design and construction validation activities for Unit 2 that were similar in scope and approach to those conducted under CAP. It was possible in many cases to use the Unit 1 validated design for Unit 2, with validated changes as appropriate to account for differences between the two units. Unit 2 was also subjected to physical and engineering evaluations to validate that Unit 2 hardware conformed with the validated design. In total, these activities provided reasonable assurance that the design of CPSES Unit 2 conformed with the design bases and the as-built plant conformed with the design. Additionally, using a process similar to that described in the associated NRC inspection modules, TU Electric performed an Independent Design Assessment and a Construction Appraisal Team inspection of Unit 2. The results of these activities provided additional assurance that the validation activities were properly implemented and that the as-built plant conformed with the design bases.

Results of the CAP efforts were documented in Project Status Reports (PSRs) which were submitted to the NRC. The NRC issued Supplemental Safety Evaluation Reports (SSERs) 13-20 for Unit 1 and SSER 25 for Unit 2 which accepted the PSR conclusions. NRC's review of these efforts collectively found them comprehensive and effective, particularly with respect to the use of DBDs to prescribe design criteria and methodology and the use of a tracking system to provide confidence of confirmation of data.

DBDs were adopted as one of the cornerstones of CAP. TU Electric requires DBDs to be maintained current and consistent with the updated FSAR and design documents of record through the design control and configuration management processes described later in this letter. Engineers performing design use DBDs to identify consolidated design bases, key system design criteria and inter-system design interfaces, a cross reference to Technical Specifications and their bases, inputs to operability evaluations, and bases for technical/safety/10CFR50.59 reviews. System Engineers use the DBDs to define the physical and documentation scope of systems, as input to Maintenance Rule processes, as input to temporary modifications, as references for operability determinations, and as bases for

technical/safety/10CFR50.59 reviews. Engineers performing procurement related tasks use DBDs to identify requirements for procurement of replacement items and safety classification of parts. Engineers performing safety analyses use DBDs to document and validate accident analysis assumptions and to identify key system design criteria and design interfaces. Training uses DBDs to identify key system design features and significant unit differences.

Extensive efforts were also expended by TU Electric prior to initial licensing in preparing for operating phase activities. These efforts included preparing, verifying, and implementing normal, abnormal, alarm, and emergency operating procedures; maintenance procedures; testing procedures; design modification procedures; safety evaluation procedures; and root cause and corrective action procedures. While the initial NRC inspection in these areas to assess operational readiness disclosed deficiencies largely attributable to the state of construction completion activity on Unit 1, the ultimate success of these efforts was acknowledged by the NRC during the final phase of the Unit 1 Operational Readiness Assessment Team (ORAT) inspection (NRC inspection report 50-445/89-200).

With regard to operating procedures, the ORAT inspection report notes that the inspection team randomly selected a cross section of operating, abnormal, and alarm procedures for review. The review included walkthroughs with Operations personnel, observations of procedure use by Operations personnel, and verification that procedures could be used as written in the Control Room and the plant. For each procedure reviewed, the inspection team verified that plant drawings and equipment nomenclature described in the procedure reflected the as-built condition of the facility. While some deficiencies were identified and subsequently corrected, such as labeling inconsistencies, component location errors, and reference errors, the ORAT concluded the procedures were generally well written. The team concluded that the procedure discrepancies identified did not affect safety, the intent of the procedures could be met, and the procedures could be performed in spite of the deficiencies.

The ORAT also reviewed Maintenance Department programs and procedures to establish that maintenance activities of safety related structures, systems, and components were being conducted in accordance with approved procedures. In addition, several work activities were observed. The team did not identify any discrepancies with the maintenance procedures in its inspection report and concluded maintenance was being performed in an acceptable manner.

The ORAT conducted tabletop reviews of a number of surveillance procedures and observed performance of additional procedures. As described in the associated inspection report, the objectives of the reviews were to determine the technical adequacy, accuracy, and quality of surveillance procedures. While a number of discrepancies were identified, the team noted that these were minor and the procedures were well written and contained sufficient detail so test objectives could be achieved. Overall, the team concluded the quality of surveillance procedures reviewed was satisfactory.

The ORAT noted that measures had been established in controlling procedures to ensure design modifications were in conformance with the requirements of the Technical Specifications, 10CFR50.59, the Final Safety Analysis Report (FSAR), and the Quality Assurance Program. Based on its review, the team concluded modification controls were adequate to support modifications performed during operations.

Similarly, the ORAT reviewed the procedure governing the conduct of safety evaluations pursuant to 10CFR50.59. The team noted the procedure followed the guidelines of NSAC/125, "Guidelines for Performance of 10CFR50.59 Safety Evaluations." The team also reviewed a number of completed 10CFR50.59 safety evaluations and found them acceptable.

Finally, the ORAT examined the problem identification and corrective action program. This program was the Operations Notification and Evaluation (ONE) Form process described in greater detail later in this letter. The team found the program provided directions for initiation of ONE Forms, swift review by the Shift Manager for operability and reportability determination, and subsequent processing for responsibility assignment and resolution. The team's review of dispositioned ONE Forms indicated the proper threshold was established for designation of the proper corrective action process. The controlling programs, timeliness, and useability of the process appeared acceptable to the team. Notwithstanding, the ORAT did identify some shortcomings in the identification of root causes of problems. These findings prompted improvements in the qualifications of those performing root cause analyses and in the governing procedures. This action was tracked to successful closure by open item 445/89200-0-16.

Additional confidence that CPSES was configured consistent with design bases requirements at the time of licensing is provided by the preoperational and initial startup testing programs. The testing requirements and general acceptance criteria for these programs are

described in Chapter 14 of the updated Final Safety Analysis Report. Testing was conducted utilizing procedures prepared, reviewed, and approved in accordance with FSAR and Quality Assurance Program requirements. Specific acceptance criteria were based in part on design bases requirements. In many cases operating procedures were used to support testing activities. Extensive in-line, Quality Assurance, and NRC overview of these programs and their implementation was provided.

The overall successful implementation of these programs with satisfactory test results provides reasonable confirmation that at the time of licensing design bases requirements had been successfully translated into the as built plant and that the preparation of operating procedures had appropriately included design bases information. Discrepancies were identified during the conduct of these programs; however, the number of discrepancies was relatively small and the nature did not indicate any broad breakdowns in the translation of design bases information into the as-built plant or the operating procedures. Identified discrepancies were documented, evaluated, and resolved in accordance with the Quality Assurance Program.

Taken collectively, the efforts undertaken by TU Electric and confirmed by the NRC provided reasonable assurance at the time of licensing that design bases were contained in DBDs and translated correctly into the as-built plant, and that operating, maintenance, testing, modification, safety evaluation, and corrective action procedures complied with design bases and regulatory requirements. This information, combined with the configuration control and corrective action information presented below, provides adequate confidence that the as-built plant and plant operating, maintenance, testing, and modification activities conform with design bases requirements.

The remainder of this letter provides information responsive to specific information requests (a) through (e) of the 10CFR50.54(f) letter. This information describes elements of the processes which provide reasonable assurance that CPSES Units 1 and 2 continue to be operated in compliance with their design bases and the rationale for concluding that the processes are working.

.. Requested Information

The following specific information was requested for each licensed unit:

a) Description of Engineering Design and Configuration Control Processes, including those that implement 10CFR50.59, 10CFR50.71(e) and Appendix B to 10 CFR Part 50;

b) Rationale for concluding that design bases requirements are translated into operating, maintenance, and testing procedures;

c) Rationale for concluding that system, structure, and component configuration and performance are consistent with the design bases;

d) Processes for identification of problems and implementation of corrective actions, including actions to determine the extent of problems, action to prevent recurrence, and reporting to NRC;

e) The overall effectiveness of current processes and programs in concluding that the configuration of the plants is consistent with the design bases.

As the two CPSES units share a common updated FSAR and the processes potentially impactive to design bases compliance are shared, information presented below is applicable to both Units 1 and 2.

III.A TU Electric Response to Information Request (a)

(a) Description of Engineering Design and Configuration Control Processes, including those that implement 10CFR50.59, 10CFR50.71(e), and Appendix B to 10 CFR Part 50.

III.A.1 Design Control Process

10CFR50, Appendix B, Criterion III. Design Control, requires that measures be established to assure applicable regulatory requirements and the design bases, as defined in 10CFR50.2 and as specified in the license application, are correctly translated into specifications, drawings, procedures, and instructions. The CPSES design control program satisfies 10CFR50, Appendix B using the methodology of Regulatory Guide (RG) 1.64 and ANSI N45.2.11-1974. The general design control procedure defines the general

requirements for design control at CPSES and the functional responsibilities required to ensure design activities are conducted in a planned and controlled manner.

Design inputs are controlled by the design input procedures and are required to be consistent with design bases information contained in licensing basis documents (LBDs). Design inputs include:

- o Inputs identified in ANSI N45.2.11 (e.g. basic functions, codes, standards, and licensing commitments, etc.)
- o Additional requirements (e.g. applicable experience reports, requirements from approved corrective action programs, and configuration control)

Design (output) documents include:

- o DBDs
- o Specifications
- o Design Drawings
- o Design Change Notices

10 CFR 50.59 screens and, if necessary, evaluations as described elsewhere in this document are required for the design output documents listed above, including changes to these documents. Internal design interfaces and design verifications are controlled in accordance with the procedure governing review of design documents. This design document review procedure is applicable to design changes to design output documents. This procedure includes processes to identify and document interfaces with engineers performing interdiscipline reviews, engineering specialists (e.g., fire protection, ALARA, Motor Operated Valves), and non-engineering groups (e.g., operations, maintenance). The procedure also includes processes to identify and document design verification in accordance with RG 1.64. Instructions for the design verifier are provided in accordance with ANSI N45.2.11. Verification of appropriate design inputs in accordance with the design input procedure is required.

Design change notices (DCNs) are controlled in accordance with the design change notice procedure. DCNs may be used, in lieu of

revision, to change design output documents (i.e., DBDs, specifications, and drawings) except calculations which are separately controlled. DCNs require reviews pursuant to 10 CFR 50.59. Change verification for internal interface control is in accordance with the design document review procedure as described above. Design verification in accordance with the same procedure (review of design documents) is required for safety related and certain non-safety related DCNs. External design interfaces are controlled via design inputs or via design representative concurrence when a vendor is responsible for any aspect of the design change.

Technical Evaluations of Replacement Items (TERIs) are controlled by the TERI procedure. The TERI process complies with ANSI N18.7. If a design change is required for a replacement item, it is required to be prepared, reviewed and approved in accordance with the design control program described above.

Maintenance activities which are determined to alter the physical configuration of SSCs but not their design function are evaluated by an engineering procedure. The evaluation process complies with ANSI N18.7 and assures that configuration changes are appropriately documented. The maintenance alteration evaluation process ensures the associated work activities will not introduce a new failure mode, will not violate applicable quality criteria, and will not degrade performance attributes outside the applicable controlling design criteria as defined in the licensing and design bases and/or specifications. Changes which require a 10CFR50.59 evaluation are not performed by this process.

A controlled database contains the master design document lists and design change documents. This database provides an account of changes affecting a given document. A report provides information concerning the status of design changes and incorporation criteria. This enables users of design documents to determine whether changes to that document are outstanding so that such changes can be properly considered by the users. Changes not yet incorporated into a design document are posted against that document. The timeliness of incorpcrating design changes into design documents is based on the maintenance level of the document. In general, the maintenance level is dictated by the frequency of document use and the impact of that use. For

example, station drawings used in making operational decisions and for establishing clearance boundaries are to have changes incorporated within 72 hours. Infrequently used drawings and specifications have a less restrictive change incorporation requirement.

Design changes are implemented via the work order process. This process results in the preparation of suitable installation instructions in a format commonly used by craft personnel for maintenance activities. The work order process also requires that the work instructions be evaluated for plant impact and the applicability of other processes such as: As Low As Reasonably Achievable (ALARA), fire or security impairments, radiation work control/permits, confined space entry requirements, and quality control inspections.

Modifications are normally walked down in the field to verify that the installation satisfies design requirements and to identify any previously unidentified impacts to other structures, systems, or components, or to operations. Additionally, following installation, modifications are required to be subjected to appropriate testing. This testing serves two purposes. First, it establishes the quality of construction through such tests as circuit continuity and pressure/leak testing. Second, it establishes that the modified configuration performs as intended.

As part of the modification acceptance and closeout process, the status of construction is confirmed, test results are examined for acceptability, and controlled documents such as procedures and drawings are checked to determine whether needed updates have been completed.

In NRC-issued CPSES SALP Report 92-99 the NRC noted that the program for design basis documentation was considered thorough and extensive. In SALP Report 93-99 the NRC noted that CPSES effectively implemented design changes/modifications. The SALP report stated that safety evaluations were detailed and extensive. The NRC further concluded that modifications were comprehensively reviewed to determine the impacts on procedures, drawings, the FSAR, and Technical Specifications. In SALP Report 94-99 the NRC noted that engineering programs and their implementation were excellent. Particular strengths were noted in the areas of

temporary modifications and the DBD program. In SALP Report 95-99, the NRC noted a continuing strong, knowledgeable engineering capability which successfully implemented several design modifications to improve plant reliability.

III.A.2 Configuration Control Processes

Complementing the processes described above for control of configuration related to design/design change activities, are other processes structured to assure plant configuration is maintained consistent with the design bases. These processes include commitment tracking, procedure controls, verification activities, offnormal/nonconforming/degraded condition identification and control, work control, equipment information control, and equipment labeling. Each of these is discussed below.

III.A.2.a Commitment Tracking System

A commitment tracking system (CTS) is used to aid in incorporating design bases requirements into controlled implementing documents such as procedures, specifications, design documents, and DBDs. The sources of commitments include the updated FSAR, Fire Protection Report, Technical Requirements Manual, Emergency Plan, Offsite Dose Calculation Manual, Process Control Program, Conditions and Appendices of Operating Licenses, Security Plan, Inservice Testing Program Plan, Technical Specifications Bases, Inservice Inspection Program Plan, Quality Assurance Program (FSAR Chapter 17), and CPSES and NRC docketed correspondence. Each commitment identified is required to have a tracking number and a CPSES department responsible for implementation assigned. Open commitments are tracked until the committed action has been taken. The commitment is then assigned either an incorporated status if it is an item to be actively maintained or a closed status for a one time action. Incorporating and closing documents that implement the commitments are identified in the commitment tracking database. As part of the controlled document maintenance processes, proposed changes are required to be reviewed against assigned/incorporated commitments to provide reasonable assurance of continued compliance with design bases requirements. The NRC acknowledged the

effectiveness of the CTS in inspection reports 50-445/91-202 and 50-446/90-201.

III.A.2.b <u>Procedural Controls</u>

Procedure maintenance (creation/revision) and use are controlled by station procedures structured in accordance with the requirements of 10CFR50 Appendix B Criterion V, the CPSES Quality Assurance Program, and the CPSES Technical Specifications.

Design changes are required to be reviewed to determine their impact on operating, maintenance, and test procedures. Similar to the processes described above for design/design change, key elements of the procedure maintenance processes include requirements for identification, review and approval of input from controlled documents including the updated FSAR; commitments; DBDs; identification of internal and external organizational interfaces and review requirements; evaluations for impact to the updated FSAR, other licensing basis documents and other controlled documents; evaluation for unreviewed safety questions as prescribed by 10CFR50.59; and documented reviews, evaluations, and approvals. Technical reviews of procedures are required to be performed by individuals competent in and cognizant of the subject matter being reviewed. These processes are required to be performed by individuals knowledgeable in the area affected by the procedure change and are structured to assure the proposed procedure complies with design bases requirements.

Controls on compliance with procedures are specified in various station procedures. These procedures require that activities (e.g., operation, maintenance, testing, design, etc.) be performed in accordance with approved procedures except for those activities judged to be sufficiently straight forward and commensurate with "skills possessed" such that procedures are not needed for successful task completion. These procedures further specify that activities be suspended and resolution obtained if a procedure inadequacy is identified or a situation occurs which warrants procedure control but for which a procedure does not exist. Resolution can be obtained through a combination of management approved procedure changes,

creations, or interpretations. "Pen and ink" changes are limited strictly to those situations where an error to a procedure is discovered which is editorial only.

The combination of controls on procedure maintenance and use provide reasonable assurance that activities are conducted such that design bases compliance is maintained.

III.A.2.c Verification Activities

Line organization verification activities are prescribed in station procedures. These procedures identify when verification of activities is required and to what systems it applies. Further, the procedures prescribe how the verification activities are to be performed to assure that activities important to plant configuration control are properly implemented. These verifications are in addition to those performed in accordance with the Quality Assurance Program by independent overview organizations such as Quality Control and Quality Assurance. They include such things as a structured self checking process and line organization independent verification of component positioning during system lineups, removal from/restoration to service, and testing. Verification activities also include supervisory review and approval of activities prior to conduct, pre-evolution briefings to assure appropriate understanding of activities by involved personnel prior to conduct, and supervisory review and approval of results of completed activities such as testing.

Collectively, these verification activities provide additional assurance that processes, procedures, and programs are properly implemented. This, in turn, provides added assurance of continuing compliance with design bases requirements incorporated into these processes, procedures, and programs.

III.A.2.d Offnormal/Nonconforming/ Degraded Condition Identification and Control

Offnormal/nonconforming/degraded condition identification and control is accomplished through a variety of processes. These processes provide reasonable assurance that deficiencies that

potentially challenge design bases compliance are identified, documented, evaluated, and corrected in a timely manner.

The first process is the work request process prescribed in station procedures. When equipment conditions requiring routine maintenance activities beyond "skills possessed" are identified, work requests are required to be prepared to bring the equipment back into conformance with requirements, including the DBDs. These work requests are required to be reviewed promptly to determine whether the conditions identified therein constitute conditions of inoperability, conditions reportable to the NRC (e.g., outside the design bases), or conditions requiring near term compensatory action to preserve functional capability. Conditions which require significant operator actions to compensate for, especially during off normal conditions, transients, or emergency conditions, are identified as "Operator Work Arounds" and receive elevated priority for correction. If a condition requires more than routine maintenance, represents an adverse condition, impacts operability or plant (equipment/personnel) safety, or is reportable to an outside agency, Operations Notification and Evaluation (ONE) Forms are prepared. The ONE Form process is discussed in greater detail in response to Information Request (d) below; however, the process does require reviews for operability, reportability, and impact to continued safe operation by a Senior Reactor Operator (SRO) licensed management individual. Additionally, the process is designed to ensure that equipment and processes are brought into conformance with requirements, including the DBDs, or that the design bases are appropriately changed.

The second method of offnormal/nonconforming/degraded condition identification and control is the clearance process. This process is procedurally specified. Clearances are used to provide reasonable assurance that offnormal/nonconforming/degraded equipment which potentially challenges plant or personnel safety is isolated and remains out of service until corrective action can be taken. An example would be isolation of a leaking component that could result in an environmental or flooding concern potentially challenging design bases requirements if it were to be unisolated. Caution tags are used as one way to identify off-normal system/component

alignments that will continue beyond one shift where the alignments are not otherwise being controlled in accordance with an approved procedure. Test tags are used to indicate equipment in a test configuration. Test and caution tags provide added assurance that the condition will be recognized and incorporated into other operating and configuration control decisions thereby providing added assurance of continuing design bases compliance.

The third method of offnormal/nonconforming/degraded condition identification and control is the instrument/annunciator program process. In addition to preparing work requests for malfunctioning main control board annunciators and instruments, this process requires identification of the problem component by affixing a colored dot or work request sticker and completion of a log sheet identifying the component and compensatory actions necessitated by the problem, to assure continued compliance with design bases requirements. Supervisory review and approval are required as part of implementing this process. This identification is required to remain in-place until the functioning of the annunciators or instrument is restored.

The fourth method of offnormal/nonconforming/degraded condition identification and control is the Limiting Condition of Operation Action Requirement (LCOAR) process. This process applies to structures, systems, and components with operability requirements contained in the Technical Specifications, Technical Requirements Manual, and Offsite Dose Calculation Manual, and other selected equipment determined to be important to safe plant operation such as Instrument Air, Spent Fuel Pool Cooling, Anticipated Transient Without Scram (ATWS) Mitigating Systems, and Reactor Makeup Water. The process requires inoperable SSCs to be logged and, for SSCs with operability requirements, a form completed identifying required compensatory actions to be implemented, including those which are recurrent. Implementation of these actions is documented on the form as they are completed. The process also requires actuation of the appropriate Safety System Inoperable Indication system if it is not already actuated as a result of the condition of inoperability.

The fifth method of offnormal/nonconforming/degraded condition identification and control is the locked component program. The process provides criteria for securing components in positions assumed in the design bases. It specifies the review, approval, and documentation requirements for changing the position of such components other than changes required by in-progress procedures. Finally, it specifies verification requirements for restoration of components to their required positions. As described above, these verification activities provided added assurance that design bases configuration is maintained.

The sixth method of offnormal/nonconforming/degraded condition identification and control is performance of periodic system lineup verifications. Such lineups are conducted in whole or in part as part of system/plant startup activities, maintenance and clearance restoration, and surveillance activities. These lineup verifications, accomplished using approved procedures prepared using design bases information as an input, provide reasonable assurance that plant configuration is maintained consistent with design bases requirements.

III.A.2.e <u>Work Control</u>

Maintenance and surveillance activities are scheduled in a rolling schedule with each week dedicated to a specific train of safety related equipment. In addition, the combination of components to be removed from service simultaneously are examined utilizing risk-based criteria derived in part from risk-based insights and design bases requirements and assumptions, and schedule adjustments made as necessary. Emergent conditions and work are similarly examined to assure they can be accommodated without incurring undue risk or configurations contrary to technical specification or design bases requirements. This examination appropriately assures that design bases functional capabilities are maintained. In those cases where the emergent work includes equipment failures that must be addressed, on-going work may be stopped and restored and/or scheduled work delayed to minimize risk exposure and ensure continuing conformance with the design bases. SSCs undergoing maintenance are required to be identified with work-in-progress tags when work is not actively

being performed to alert personnel that the status of the SSCs may be other than normal.

III.A.2.f <u>Equipment Information Control</u>

Equipment information control is another method of configuration control. CPSES has created a Master Equipment List (MEL) and a Master Parts List (MPL), which are controlled and contain validated information. These lists reflect significant plant equipment and contain directly, or by reference, equipment type, location, safety class, qualification requirements, vendor, and other information necessary to control/maintain/replace the equipment consistent with DBD and design bases requirements. The MEL and MPL are updated as appropriate from design information, as-found data, and related vendor information. These updates are driven by the design change process and are completed under the auspices of the Quality Assurance Program. Currently the MEL is being upgraded to improve its technical content and useability as part of an internally identified improvement initiative.

III.A.2.g <u>Equipment Labeling</u>

A final method of configuration control used at CPSES is equipment labeling. Enhanced labels with equipment numbers and noun identifiers consistently established in the field, in procedures, on drawings, and in the equipment information system have been installed at CPSES. These labels provide reasonable assurance that activities to be performed relative to equipment consistently address the configuration of that equipment, both physical and documentation, and that activities specified by controlled documents affecting equipment configuration will be accomplished on the correct equipment by providing common and consistent identifiers of equipment in the field, in the MEL, and in other operating and configuration management documents.

Collectively, the configuration control activities described above satisfy the requirements of 10CFR50 Appendix B.

III.A.3 <u>10CFR50.59 Process</u>

TU Electric developed an administrative procedure and associated review guide to provide instructions for evaluating proposed changes, tests, and experiments to determine whether they potentially involve unreviewed safety questions or Technical Specification changes. NSAC-125, "Guidelines for Performance of 10CFR50.59 Evaluations," is the basis for the CPSES 10 CFR 50.59 Review Guidelines.

The process is summarized as follows:

(1) Perform documented activity screens to determine whether a change, test, or experiment may require a change to the licensing basis or involves changes to the Technical Specifications.

(2) If an activity is determined to require a change to the licensing basis, a written safety evaluation is required to be performed to determine whether the activity involves an unreviewed safety question.

(3) The Station Operations Review Committee (SORC) is required to review and approve safety evaluations and to concur that proposed changes, tests or experiments either do or do not involve an unreviewed safety question.

(4) Proposed changes, tests or experiments that involve an unreviewed safety question and their associated safety evaluations are required to be reviewed by the Operations Review Committee. Such proposed changes, tests, and experiments are also required to be approved by the NRC prior to implementation.

Individuals responsible for preparing and reviewing 10 CFR 50.59 evaluations are required to attend a training class and be knowledgeable of the technical and administrative matters related to the activity being reviewed.

While the CPSES 10 CFR 50.59 process has been successful in providing assurance that proposed changes, tests and experiments do not involve unreviewed safety questions as reflected in the results of various reviews, including reviews conducted by the Station Operation Review Committee, the Operations Review Committee, the Nuclear Overview Department and NRC inspections, a recent Nuclear Overview Department (NOD) Evaluation identified a CPSES 10CFR50.59 Activity Screen documentation shortcoming. Specifically, several Activity Screens did not list all applicable Licensing Basis Documents (LBD) and/or LBD sections as having been reviewed and several did not provide full justification for not performing a Safety Evaluation. The NOD evaluation revealed these weaknesses have occasionally resulted in inappropriate conclusions with respect to whether Safety Evaluations were required; however, no instances were identified where the weaknesses contributed to a failure to identify an unreviewed safety question. The conclusions reached by the NOD evaluation were that personnel qualified to perform 10 CFR 50.59 Activity Screens and Evaluations need to refamiliarize themselves with the concepts described in the 10CFR50.59 review guide and procedurally prescribed documentation requirements, and improvements in accessibility of licensing basis information need to be made. Associated recommendations are currently under evaluation.

III.A.4 <u>10CFR50.71(e) Safety Analysis Report Maintenance Process</u>

TU Electric submitted a Final Safety Analysis Report (FSAR) in support of the application for an operating license for CPSES Units 1 and 2 on February 28, 1978. The FSAR included information that described the facility, presented the design bases and the limits on its operation, and a safety analysis of the structures, systems, and components and of the facility as a whole. During the completion of construction activities, TU Electric amended the FSAR numerous times to maintain it up-to-date. As described above, prior to licensing of CPSES Unit 1, TU Electric initiated a comprehensive Corrective Action Program to validate the CPSES safety-related designs. This program established that the design of safety-related SSCs complied with licensing commitments, and that the SSCs were constructed in accordance with the design. As a result, TU Electric certified the accuracy of the FSAR in support of Unit 1 licensing. Following the licensing of Unit 1 and prior to the licensing of Unit 2, TU Electric continued to

amend the FSAR on a periodic basis. In early 1993, Unit 2 was licensed and TU Electric again certified the accuracy of the FSAR.

Since licensing CPSES Units 1 and 2, TU Electric has employed ongoing processes to identify changes needed to support issuance of the updated FSAR. As a result, an updated FSAR was issued on February 2, 1995, and was certified accurate through August 1, 1994 (Amendment 93). Since issuance of the updated FSAR, only one FSAR amendment (Amendment 94, issued August 1, 1996) has been issued.

TU Electric has a program for control and revision of the updated CPSES FSAR and other documents relating to licensed activities. These documents include:

- Final Safety Analysis Report (updated)
- Security Plans
- Fire Protection Report
- Inservice Testing Program Plan
- Technical Requirements Manual
- BASES Sections of the Technical Specifications
- Emergency Plan
- Inservice Inspection Program Plans
- Offsite Dose Calculation Manual
- Core Operating Limits Report
- Process Control Program
- Quality Assurance Program (FSAR Chapter 17)
- Conditions and Appendices of the Operating License
- CPSES and NRC docketed correspondence (e.g., SER/SSER, Confirmatory Action Letters, Orders from the NRC, and Docketed Outgoing Correspondence from TU Electric to the NRC)

Changes to the FSAR and the Quality Assurance Program (chapter 17 of the FSAR) are administratively controlled by one administrative procedure. Changes to the remaining documents listed above are controlled by a separate administrative procedure. These two

procedures use similar processes for updating the subject documents, with the exception of some specific conclusions (i.e., impact of the update on the effectiveness of programs versus creation of unreviewed safety questions).

The procedures which control the change processes (procedure changes, design modifications, etc.) require a Licensing Basis Document (LBD) review. The program for updating the FSAR requires an individual identifying the need for a change to obtain a License Document Change Request (LDCR) tracking number when they become aware of a potential need for a revision. If required, an LDCR is initiated in accordance with the procedures described above. The LDCRs are the vehicle for making changes to licensing documents.

In accordance with 10CFR50.71(e), procedures require that the updated FSAR include the effects of changes in the facility and procedures as described in the FSAR, safety evaluations performed in support of license amendments and changes that do not involve an unreviewed safety question, and analyses of new safety issues performed at NRC's request. These updates include not only changed information but also summarize the results of new analyses.

Proposed changes are reviewed along with the associated activity as required by the CPSES 10 CFR50.59 review program and are forwarded to the CPSES Regulatory Affairs Department for incorporation. Prior to incorporation, Regulatory Affairs conducts reviews of other LBD manuals to assure that consistency will be maintained upon incorporation of a change. Commitments are also captured for tracking as discussed in Section III.A.2.a above. Furthermore, additional technical reviews may be conducted to further assure that specific changes accurately reflect CPSES activities. A page by page description is prepared and submitted to the NRC with each FSAR amendment.

As part of the industry initiative to address licensing basis conformance issues, the CPSES Nuclear Overview Department formed an evaluation team to gather and evaluate a sampling of data pertaining to the maintenance of the licensing basis for CPSES. The evaluation scope included the collection and evaluation of data obtained (1) from a programmatic sampling of plant programs

and (2) from a sampling of potential changes that may occur separate from programmatic or procedure changes.

Programmatic sampling of plant programs enveloped the following:

a. changes made under 10 CFR 50.59;
b. responses to 10 CFR 50.54 requests;
c. outstanding corrective action for a material condition greater than one year old;
d. operating procedure changes not evaluated under 10 CFR 50.59 per STA-707;
e. Final Safety Analysis Report (FSAR) change requests;
f. 10 CFR 50.90 / 10 CFR 50.55a changes and associated Safety Evaluation Reports (where NRC approval had been received);
g. regulatory commitment addition or change; and
h. design changes not evaluated under 10 CFR 50.59 per STA-707.

A total of fifty-seven (57) items were reviewed: twenty-four (24) activities involving plant program changes and thirty-three (33) change activities that occurred separate from programmatic/procedure changes. These included such things as Operator Work Around list items, old clearance items, old temporary modifications, and nonconforming conditions greater than one year old. The licensing basis information was researched to assess whether the item/activity should have appeared in the licensing basis and, if so, whether the licensing basis accurately reflected the change.

The evidence indicated that there were no conflicts or inconsistencies for the fifty-seven (57) items/activities reviewed as compared with the requirements of the CPSES Licensing Basis Documents. One case was identified while reviewing a commitment change activity where a plant program was changed to incorporate a newer ASTM (American Society for Testing and Materials) industry standard for manual sampling of petroleum products. The newer standard superseded the standard mentioned in the licensing basis. The need to update the licensing basis had previously been identified and was being tracked; however, the licensing basis had not yet been updated. Another case was identified where commitment data forms were not updated to reflect the current

licensing basis information. These two (2) cases have been identified in accordance with the ONE Form program.

The evaluation concluded that the items reviewed that should have appeared in the licensing basis were accurately reflected in the licensing basis. The two identified issues are deviations from the implementation requirements of our program, but do not represent a program breakdown. Based on this sampling of fifty-seven (57) items, adequate confidence exists that effective controls are in place to ensure appropriate licensing basis updates are made.

The NRC acknowledged the effectiveness and comprehensive nature of CPSES FSAR change packages in the Systematic Assessment of Licensee Performance (SALP) report covering the period February 3, 1991 through February 1, 1992 (50-445/92-99; 50-446/92-99). The processes in place today contain the same key elements as were in place then.

III.B <u>TU Electric Response to Information Request (b)</u>

(b) Provide the rationale for concluding that design bases requirements are translated into operating, maintenance, and testing procedures.

As described in the preceding section of this letter, procedure maintenance is governed by station procedures. The processes have remained essentially unchanged since initial licensing of Unit 1. Evidence of appropriate implementation of the controls on procedure maintenance exists in the generally successful use of operating procedures in controlling plant evolutions and in self assessment, review, and inspection documentation in this area.

The CPSES Operations Department has in place an Operations Management Overview Program (OMOP). The purpose of this program is to accomplish self-assessments of the department's diverse processes and programs. OMOP consists of a series of modules each addressing a selected topic. One module focuses on procedure quality. Attributes examined by this module include technical accuracy and adequacy, incorporation of CPSES and industry operating experience, timely incorporation of operational feedback, and maintenance of consistency between various

procedures. To date, this module has been performed approximately 30 times. These reviews have identified the need for approximately seven procedure enhancements. Only one was related to a technical error in a procedure. This involved an incorrect location of an Instrument Air system valve.

NRC inspection reports were reviewed for comments on operations procedure/configuration/FSAR compliance. One instance of inconsistency was identified involving Spent Fuel Pool Cooling. The inconsistency resulted from an incomplete impact assessment of a plant modification. Since this occurrence, Operations' impact assessments of modification activities have been performed using a checklist. This provides added confidence that required aspects of procedure consistency are taken into account when evaluating plant modifications.

Recently, a discrepancy between the updated Final Safety Analysis Report description of the process to transfer from Emergency Core Cooling System (ECCS) injection to Containment Sump Recirculation following a Loss of Coolant Accident and the corresponding emergency operating sub-procedure was identified. Initial evaluation demonstrates that the discrepancy does not affect the ability to satisfy ECCS functional requirements. Further evaluations are in progress to determine the cause of the discrepancy and identify appropriate corrective actions.

Similar to the experience in using operating procedures, the overall success of maintenance procedures in restoring equipment to operable and functional status, as demonstrated by generally satisfactory post-maintenance and surveillance testing and inservice performance, demonstrates the technical adequacy of maintenance procedures and the integrity of the processes for preparing, reviewing, and approving these procedures.

Review of NRC inspection reports generally reveals that design and licensing bases information is routinely incorporated in preventive maintenance and surveillance test programs and procedures. NRC inspections found surveillances were implemented in accordance with Technical Specifications and implementation of preventive maintenance was adequate. Preventive maintenance and surveillance test problems addressed in NRC inspection reports

were determined to be isolated occurrences appropriately addressed by corresponding corrective action.

Recently completed Nuclear Overview Department Evaluation NOE-EVAL-96-000161 examined implementation of six Technical Specifications and provides added assurance of surveillance procedure adequacy. CPSES programs that implement the subject Technical Specifications were verified to meet applicable FSAR requirements. The surveillance procedures which are used to implement the associated Technical Specification requirements were found to satisfy the associated requirements.

As a final measure of assurance of procedure compliance with design bases requirements, databases compiled since licensing CPSES Unit 1 demonstrate that procedure adequacy has been maintained. Discrepancies have been few in number, corrected, reviewed for generic implications, and have undergone follow up reviews to confirm implementation of corrective actions. Databases include:

- o ONE Forms
- o Nuclear Overview Evaluations
- o Technical Audits
- o CPSES Correspondence
- o Independent Safety Engineering Group Assessment Reports
- o Independent Safety Engineering Group Surveillance Reports

Based on the in-place controls governing use of design bases information in operating, maintenance, and testing procedure creation and maintenance, the successful use of these procedures, and the results of self assessment and inspection activities, it is concluded that reasonable assurance exists that operating, maintenance, and testing procedures at CPSES appropriately reflect design bases information requirements.

III.C <u>TU Electric Response to Information Request (c)</u>

(c) Provide the rationale for concluding that system, structure, and component configuration and performance are consistent with the design bases.

As discussed in Section II of this letter, TU Electric conducted comprehensive verification and validation activities prior to operation of CPSES Units 1 and 2. These activities provided reasonable assurance that at the time of initial licensing the validated design documents conformed with the design bases, and that the as-built plant conformed with the validated design documents.

As described in Section III.A of this letter, since before initial licensing, comprehensive controls have been in place to assure plant configuration is maintained consistent with the design bases. These controls include requirements to use and comply with procedures, station verification activities, off-normal/nonconforming/degraded condition identification and control; work control; design/design change control; equipment information control; and equipment labeling. Design bases information has been and continues to be incorporated into the various procedures and processes utilized to control plant configuration. Changes to these procedures and processes are reviewed to provide adequate confidence they consider and reflect design bases information.

Evidence that plant configuration has been maintained compliant with design bases requirements is provided by four "vertical slice" type self-assessments performed since licensing Unit 1. The first of these was an Integrated Design Assessment (IDA). This effort was based on the NRC's Integrated Design Inspection methodology. It evaluated design basis documents, calculations, specifications, drawings, FSAR sections, and commitments associated with the Unit 2 Emergency Diesel Generator (EDG) system and included walkdowns of selected portions of the subject systems. It also evaluated associated portions of the Electrical Load Systems; Station Service Water System; Heating, Ventilating, and Air Conditioning System; and Emergency Core Cooling System. The conclusions reached were that the Unit 2 EDG system design was adequate and, with minor exceptions, the DBDs were comprehensive and technically adequate; design procedures, specifications, and drawings were technically adequate; and design related commitments were satisfactorily incorporated into the design. This was based on a review of 25 DBDs, 24 design related procedures, 10 specifications, approximately 160 design drawings, and 40 design related commitments.

The remaining three "vertical slice" assessments were performed by the Nuclear Overview Department. In 1993 a review of the Instrument Air system was performed using an NRC Safety System Functional Inspection approach. The assessment included walkdowns and a detailed review of technical information such as DBDs, design drawings, modifications, and the FSAR.

The effort concluded that the system was marginally capable of providing air of specified quality and quantity to support dual unit operation. As a result of this effort, a number of modifications have been made to the Instrument Air system to improve its overall performance, including replacement of a number of compressors with larger capacity units and installation of new air dryer units.

Also in 1993, a review of the Station Service Water System was performed using the NRC Station Service Water System Operational Performance Inspection methodology. The assessment included system walkdowns and reviews of work orders, ONE Forms, technical evaluations, modifications, procedures, the updated FSAR, and DBDs. Sections of the updated FSAR describing Service Water and the Ultimate Heat Sink were reviewed and compared to the DBD. The two sets of documentation were found to contain consistent information with minor exceptions. It was also determined that Service Water System design was adequate and being satisfactorily maintained to ensure system capability of delivering cooling water to both CPSES units as required by the design bases.

In 1996, a Safety System Functional Inspection type review was conducted on the Auxiliary Feedwater System. The review included system walkdowns, and reviews of ONE Forms, modifications, calculations, drawings, DBDs, and updated FSAR sections dealing with the system. The overall conclusions reached were that the design bases is adequate, the existing configuration is generally consistent with design requirements, and that documents describing the design bases are consistent. Additionally, it was concluded that changes made to the system have not affected the capability of the system to perform its safety function.

Additional assurance that structures, systems, and components will function consistent with design bases requirements is provided in part by the CPSES Maintenance Effectiveness Monitoring Program,

which embodies the requirements of the Maintenance Rule established pursuant to 10CFR50.65. At CPSES, the implementation of the Maintenance Rule requirements consists of two major activities:

1. Establishment of the baseline program; and

2. The continuing monitoring program

The baseline functions of systems were identified by reviewing the DBDs, interviewing system engineers, and reviewing the Master Equipment List (MEL). The functions were then compared to the five (5) scoping criteria in the NUMARC 93-01 guidelines.

1. Safety related SSCs
2. Non safety related SSCs that mitigate accidents or transients
3. Non safety related SSCs that are used in Emergency Operating Procedures (EOPs)
4. Non safety related SSCs whose failure prevents safety related SSCs from fulfilling their safety related function
5. Non safety related SSCs whose failure causes scrams or actuates safety systems

Technical Specifications, the updated FSAR, the Quality Assurance Manual, DBDs, Normal and Emergency Operating Procedures, the MEL, Probabilistic Safety Assessment/Individual Plant Examination (PSA/IPE) reports, and industry experience information including LERs and CPSES system engineer interviews were all used as sources of information in the scoping effort.

When a function met any of the scoping criteria listed above, its associated system, subsystems, trains, subtrains, or groups of components that support in-scope functions were included in the scope of the Maintenance Rule Program.

Performance criteria were established to monitor performance of system functions within the scope of the Maintenance Rule. Plant level performance criteria are used to monitor most functions. Where this was not sufficient, system and train functional criteria were developed. In addition, action level criteria were

developed to identify the need to prevent challenging these criteria. Functional failures, maintenance preventable functional failures (MPFFs) and unavailability hours are used in various combinations to monitor system performance. The monitoring results are trended as appropriate in the Living Maintenance System (LMS).

The results of the selection process, the determination of risk significance, the system functions and the associated document references, the performance criteria and action levels are all documented and maintained in LMS.

Changes to system DBDs are provided to the system engineers to review for impact to the Maintenance Rule scope. Design Modifications are reviewed by system engineers for change to system function scope and potential risk significance changes. EOP changes impacting Maintenance Rule scoping are reviewed by system engineers. Any changes resulting from any of the above processes are addressed by system engineers by processing a change to the database for scoping and performance criteria changes.

Additional evidence that the various programs described above for maintaining plant configuration are working is provided by the OMOP Program discussed in the response to information request (b) above. This program, implemented since August 8, 1993, contains a module on annunicator/instrument control, a module on technical specification limiting conditions for operation, a module on clearance control, a module on temporary modifications, and a module on system configuration control. The module on annunicator/instrument control has been performed approximately 38 times with only administrative issues identified. During the approximately 47 performances of the module on technical specifications limiting conditions for operation only two substantive issues have been identified, each related to consistency of Limiting Condition for Operation Action Requirement (LCOAR) termination criteria with procedure requirements. These have been resolved and a review of standard LCOARs for technical correctness was performed which verified the acceptability of LCOAR and procedures.

The module on clearances has been performed approximately 30 times. While some administrative and implementation problems have

been identified, substantive configuration control problems have been infrequent. Ties to LCOARs were consistently established when required. To improve performance in this area guidance has been provided to those releasing/removing clearances to establish system alignment where possible consistent with that specified in the system operating procedures.

The module on temporary modifications has been performed approximately 30 times. Several temporary modifications had some documentation or administration problems such as all affected procedures not listed in the package. The discrepancies were resolved.

The module on system configuration control was performed approximately 25 times. No substantive configuration control issues were identified. Some shortcomings in completing or documenting independent verification were identified prompting a reemphasis of the requirements with shift personnel.

Overall, the results of the OMOP efforts provide confidence that the CPSES routine configuration control processes are being correctly implemented.

Confirmation that the design/design change processes are working and that plant configuration and performance conforms with the design bases comes from NRC inspection reports and internal assessments. NRC inspection reports have noted 1) the design change process provides the required control of facility design changes, 2) engineering and safety analyses demonstrate considerable effort and conservative judgement, 3) design change packages are comprehensively documented, design change packages are well structured with thorough technical justifications and detailed safety evaluations, 4) background design change documentation is comprehensive, and 5) the design change process is effective.

The NRC conducted a Configuration Management Inspection (CMI) on CPSES Units 1 and 2 from November 18 through December 13, 1991. The team examined both design and construction attributes, and reviewed Unit 2 as-built components, systems, and structures to assess the adequacy of the design control program and ensure proper translation of design requirements. The CMI team did find

some deficiencies, but concluded that CPSES had generally effective programs to ensure the quality of design, construction, testing, and control of work activities.

As noted below, the information provided from the processes for problem identification and resolution shows design bases maintenance is routinely evaluated by the Nuclear Overview Department, specifically through corrective action program monitoring. The results of these evaluations provide reasonable assurances that design bases compliance is being maintained.

A number of examples illustrate the successful use of the processes described above. The first two conditions reportable as outside the design bases at CPSES illustrate successful implementation of the program identification and resolution process. Both conditions were identified while implementing test procedures containing criteria from design bases requirements. The specifics of these examples are presented below in response to information request (d).

An additional example concerns Spent Fuel Pool Cooling. During internal reviews conducted in preparation for the first Unit 1 refueling outage, it was discovered that the Spent Fuel Pool Cooling calculations did not satisfy the design bases requirements in the DBD related to assumed decay heat loads, makeup water requirements, and setpoints. ONE Form 92-545 was issued against the subject DBD to track corrective actions. A series of design change notices to update the DBDs were issued along with corresponding FSAR changes pursuant to 10CFR50.59. Four design modifications were subsequently made along with 123 calculations and calculation changes issued. Spent fuel storage at CPSES was evaluated by the NRC in 1995, including reviews of the FSAR, DBDs, and calculations. No significant discrepancies were identified.

The principal source of information regarding SSC performance relative to design bases requirements is routine testing. Routine testing includes such activities as surveillance testing requirements from the Technical Specifications, Technical Requirements Manual, Offsite Dose Calculation Manual, and ASME Code Inservice Testing and Inservice Inspection activities. While occasional testing failures have occurred, the vast majority of testing is successful, demonstrating SSC performance consistent

with performance criteria derived from the design bases. Where testing failures have occurred, appropriate controls have typically been applied from the corrective action processes and the processes for offnormal/nonconforming/degraded condition identification and control. These processes have provided reasonable assurance that the cause of the failure was identified and appropriately addressed and generic implications considered. Examples of how testing failures have been handled are provided in the response to information request (d) below.

Additional information regarding SSC performance is being acquired and dispositioned as part of the CPSES Maintenance Effectiveness Monitoring Program, as described above. While it is somewhat premature to draw conclusions from this program given the relatively short time it has been in place, efforts at performance monitoring have either demonstrated satisfactory results or have produced a set of corrective/improvement actions to enhance SSC performance.

III.D <u>TU Electric Response to Information Request (d)</u>

(d) Provide information on processes for identification of problems and implementation of corrective actions, including actions to determine the extent of problems, action to prevent recurrence, and reporting to NRC.

Since initial licensing of CPSES Unit 1, design bases integrity has consistently been monitored and evaluated. These efforts were performed by a variety of groups (now consolidated in the Nuclear Overview Department) including Operations Quality Assurance (QA), Independent Safety Engineering Group (ISEG) Assessments, ISEG Surveillance, and Plant Analysis. In 1994, Nuclear Overview was formed as a functional discipline organization to provide area emphasis to activities at CPSES. The programs in place to monitor design bases compliance and maintenance include audit programs (in compliance with Appendix B), surveillances, management initiated evaluations and reports, and periodic ISEG assessments.

The threshold level for problem identification of these various programs has been maintained low to provide adequate confidence in the identification and remediation of identified problems. Additionally, these various monitoring programs have utilized

multiple focus points to assure thorough evaluation of subject matter. From detailed vertical slice audits, QA audits, and detailed ISEG reports, both a performance based and a compliance based perspective has been achieved. From other programs such as ISEG Surveillance and Evaluation reports, a performance based perspective is provided. Also, from the Plant Analysis and Trending group, a historical basis has been preserved and monitored to facilitate the identification and evaluation of adverse trends.

The central element in the process for documentation and resolving identified problems is the ONE Form process. The ONE Form process requires anyone identifying a problem other than the need for routine equipment corrective maintenance to complete the problem description section of the ONE Form and deliver it promptly to the Operations Shift Manager (SM), a Senior Reactor Operator licensed management individual. The SM is responsible for reviewing the problem description and evaluating the impacts to plant operation, equipment operability, and reportability to outside agencies including the NRC. For those cases where plant operation or equipment operability is affected, the SM initiates compensatory or other actions as specified in plant procedures, the Technical Specifications, the Technical Requirements Manual, and the Offsite Dose Calculation Manual. Corrective actions are initiated to restore the situation or affected equipment to an operable status. Additionally, in those cases where operability is impacted, a Limiting Condition for Operation Action Requirement (LCOAR) as described earlier is required to be initiated to provide for appropriate continued monitoring and compensation for the condition until resolution is obtained.

If the SM concludes that operability is not affected but desires additional substantiating technical information, a "quick" technical evaluation (QTE) is assigned to engineering. Engineering is expected to provide the requested information as soon as possible, and normally within 24 hours. This request is noted on the ONE Form. The completed technical evaluation and associated information is attached to the ONE Form and is required to be factored into the cause and generic implications evaluations as appropriate.

Reportability of the condition is initially evaluated by the SM utilizing station procedures. These procedures contain the various non-routine reporting requirements to external agencies, including the requirements prescribed in the Technical Specifications, 10CFR21, 10CFR50.9, 10CFR50.72, and 10CFR50.73. Amplifying information for each reporting requirement is provided to assist in the reportability determination. Periodic training in reportability requirements is provided as a part of licensed operator requalification training.

If the condition is determined to be reportable in the near term, the SM or his designee is required to initiate the required report. Longer term reports such as 10CFR50.73 Licensee Event Reports are assigned to the Regulatory Affairs Department for generation and submittal.

Following SM review and initial response, the ONE Form is entered into a tracking system and forwarded to the Work Control organization. Normally within one working day, the Work Control Manager has ONE Forms reviewed by a multi-disciplined committee. The committee is normally comprised of representatives from Operations, Maintenance, Engineering, Nuclear Overview, Regulatory Affairs, and Work Control. The purpose of the committee review is to establish the technical, regulatory, human performance, and programmatic significance of the condition, determine if the condition is reportable or request a further evaluation of reportability if needed by Regulatory Affairs, identify the issues associated with the condition, and assign responsibility for investigation and corrective actions to groups responsible programmatically for the issues identified.

ONE Forms, with the exception of those documenting minor administrative issues, are required to have a causal determination performed. The formality and depth of the causal determination is a function of the significance of the event and can vary from a direct derivation determination to a formal root cause analysis. The identified cause(s) is required to be considered for generic implications. Corrective actions are to address the condition, the cause(s), and generic implications.

Closure of the ONE Form is completed by each manager assigned responsibility for the issues identified. Closure occurs only

after corrective actions are complete or the actions have been captured in another procedurally controlled program that assures their completion in a time frame commensurate with their importance (e.g., Design Modification Program). For selected, significant ONE Forms, review by the Station Operations Review Committee (SORC) occurs prior to closure. The purpose of the SORC review is to provide added assurance that issues and causes have been appropriately identified and either resolved or scheduled to be resolved in a time frame commensurate with their importance.

An example of how the ONE Form process has worked to document and evaluate conditions, including adverse trends, is provided by ONE Form 96-0163. This ONE Form documented a condition in which the FSAR was updated with revised battery service test currents, but a maintenance surveillance procedure which used this information did not get a corresponding update. The source of the information was an engineering calculation.

Because of questions regarding how to optimally use FSAR information in such situations, the ONE Form Quality Assurance Deficiency was assigned to the Nuclear Overview Department. A task team comprised of individuals from Regulatory Affairs, engineers performing design related tasks, engineers supporting plant maintenance, Maintenance, and Operations was assembled to evaluate the situation. The task team reviewed historical information including prior ONE Forms, LDCRs and internal correspondence and identified 11 other situations where discrepancies between the FSAR and other documents and/or plant configuration had occurred as a result of changes being made. Based on this information the team made a number of observations and recommendations. These included noting that changes initiated by design modifications were most likely to be incorporated into other programs and procedures, care should be exercised when using information from Technical Evaluations and calculations without performing a safety review, DBDs should be more useable and accessible, and licensing basis information should be more accessible. These recommendations are currently being evaluated.

The effectiveness of these processes is illustrated by the first two conditions determined to be reportable to the NRC as conditions outside the design bases. The first condition, documented in Licensee Event Report (LER) 50-445/90-016-00, was

identified on May 21, 1990. During capacity tests performed on steam generator atmospheric relief valves (ARVs), test results indicated insufficient capacity to support design bases assumptions for steam generator tube rupture mitigation. The ARVs were declared inoperable and a Technical Specification LCOAR entered requiring plant cooldown to Mode 4. Two causes were identified for the condition. The first was pneumatic valve controller calibration drift. The second was the specified stroke length for two of the valves was inappropriately reduced and not identified due to a less than adequate review and approval process for calibration data sheets. The condition was corrected by identifying and implementing the appropriate valve stroke lengths and reviewing a sample of calibration data sheets for consistency with design requirements. No additional discrepancies were identified. The calibration data sheet review process had previously been acceptably revised so further action was not necessary.

The second condition, documented in LER 50-445/90-032-00, was identified on September 19, 1990. On August 22, 1990, difficulty was encountered in successfully completing a containment personnel air lock leakage test. The air entering the hydraulic system was venting through a normally open valve and escaping into the Safeguards Building through a hydraulic reservoir. The operability problem posed by the failed test was initially resolved by a temporary modification which installed isolation valves in the hydraulic system tubing. Engineering review identified the hydraulic tubing to be non-safety. Subsequent review of the temporary modification by the Station Operations Review Committee questioned the non-safety classification. Further engineering evaluation led to the conclusion that the airlock hydraulic system had been inappropriately evaluated as a non-safety subcomponent of the airlock, and that its design function of serving as part of the containment leakage boundary had not been adequately specified in the DBDs, the updated FSAR, the MEL, and operating procedures. To address this situation, the classification of the hydraulic system was upgraded and commensurate modifications made. The DBDs, updated FSAR, MEL, and operating procedures were appropriately changed, including the imposition of locked valve controls on certain hydraulic system valves. A review of the updated FSAR and DBDs and a walkdown of containment penetrations was conducted to identify any with

special provisions or features. No other problems were identified with mechanical penetrations. It was determined that personnel air lock electrical penetrations were not described in the updated FSAR or DBDs. This was corrected. Finally, a sample of six safety related items with subcomponents identified as non-safety in MEL were reviewed to determine if other inappropriate classifications existed and appropriate actions taken.

These two examples illustrate that design bases requirements incorporated into test procedures allowed the identification of equipment performance outside design bases requirements. These identifications resulted in operability evaluations and corresponding implementation of Technical Specification requirements. Compensatory actions were taken in parallel with technical evaluations to determine causes and generic implications. Corrective actions were implemented to address not only the specific conditions, but also the causes and generic implications. The fact that the generic applicability was found to be limited in both examples illustrates the success of the processes to implement and maintain design bases requirements. Finally, the events were reported to the NRC as required.

As a result of a 1997 evaluation of the Corrective Action Program, four ONE Forms were identified which have been open for greater than a year and which document discrepancies between plant hardware or processes and the FSAR. These discrepancies have been outstanding for an extended period without being reviewed per the 10CFR50.59 review program (see III.A.3 above). These issues are being tracked to closure in ISEG Report IAR 97-02 which documents an ISEG assessment of our 50.59 program.

Complementing the ONE Form process in capturing deficient conditions is the employee concerns process. The principal element of this process is the SAFETEAM Program. This program is open to all workers at CPSES and provides an opportunity for concerns to be expressed anonymously, in a written or oral manner. As part of the site exit process, individuals are offered the opportunity to divulge any concerns they may have identified during their employment at CPSES regardless of whether those concerns were previously documented on a ONE Form and/or otherwise communicated to management for action.

Concerns received by the SAFETEAM Program are assigned a tracking number and entered into a system that provides assurance that the concernee's identity can remain confidential. The concerns are evaluated and classified as to safety significance and concern type. The concerns are either investigated by SAFETEAM, investigated by Corporate Security, investigated by responsible management at a level sufficient to ensure objectivity, or are investigated by a combination of the above. ONE Forms or other documents are initiated as required and corrective actions are developed and implemented.

The SAFETEAM process provides an avenue for individuals to identify issues of any type that for whatever reason may otherwise go unidentified to management. As such, it provides added assurance that problems are reported at an appropriately low threshold, are evaluated, and are acted upon. Written responses are provided to those expressing concerns. This program has been inspected by the NRC on multiple occasions with positive results.

Corrective action program, design bases maintenance, licensing basis maintenance, safety evaluation performance, and procedure maintenance activities have been subjected to overview and assessments. Overviews of these activities were consolidated into evaluation plans in 1994. For corrective actions, semi-annual evaluations focusing on identification, resolution, and effectiveness of corrective actions are performed. Other attributes of the corrective action program are monitored every 12 months. For design bases maintenance, a biennial evaluation of design input sources, design document preparation, design review activities (independent review and 10CFR50.59 evaluations), and control of design changes is conducted. In addition, a periodic vertical slice assessment evaluation plan was established and is being implemented.

Licensing basis and safety evaluation activities have been monitored as part of evaluation plans addressing design control, plant modifications, vertical slice assessments, and management controls. Similarly, procedural adequacy is monitored as part of the assessments performed at CPSES. Consolidated evaluation plans specifically address these activities.

Prior to 1994, these activities were monitored through ISEG Assessments, ISEG Surveillances, the Quality Assurance Audit Program, and the Technical Audit Program.

The following sources contain information on self identified problems from the various overview activities which were reviewed for generic implications and resolved:

- o ONE Forms
- o Technical Audits
- o NRC Inspection Reports
- o ISEG Assessment Reports
- o ISEG Surveillance Reports
- o Nuclear Overview Department Evaluation Reports

A specific example of overview of the Safety Evaluation process is provided by a recently completed ISEG Assessment of the Safety Evaluation Program as described previously in this letter (ISEG Assessment Report IAR 96-07 dated November 22, 1996). The assessment was conducted in response to a number of ONE Forms that had been generated since 1991 identifying shortcomings in safety screens/evaluations. Efforts undertaken to determine the causes of the shortcomings identified the need for qualified evaluators to re-familiarize themselves with certain program requirements and improvements in licensing basis information accessibility. Recommendations for improvements are currently being evaluated.

III.E <u>TU Electric Response to Information Request (e)</u>

(e) The overall effectiveness of your current processes and programs in concluding that the configuration of your plant(s) is consistent with the design bases.

As described in previous sections of this letter, TU Electric expended substantial resources prior to the licensing of CPSES Units 1 and 2 verifying that plant design conforms with the design bases requirements and that there was reasonable assurance that

the plant was constructed in accordance with the design. These efforts include the Comanche Peak Response Team with the associated Design Adequacy Program and Issue Specific Action Plans, the Corrective Action Plan with the associated Post Construction Hardware Validation Program and Design Validation Program and the results of preoperational and startup testing activities. NRC also expended significant efforts in verifying the adequacy of design and construction, including numerous onsite inspections conducted by an augmented inspection staff supported by the Office of Special Projects and corresponding reviews of information submitted in support of operating license issuance. These efforts were documented in a series of supplemental safety evaluation reports which ultimately concluded that CPSES was constructed in conformance with licensing and design bases requirements, and that programs were in place providing reasonable assurance that continued compliance would be maintained. Contributing to these conclusions was an Operational Readiness Team Inspection conducted shortly before Unit 1 operating license issuance and a Configuration Management Inspection conducted before Unit 2 operating license issuance.

One of the key elements to emerge from the pre-licensing activities was the DBDs. These documents captured the design bases in a format suitable for continued use in configuration management. The DBDs continue to be documents maintained as part of design bases implementation and compliance.

Since initial licensing, CPSES has had configuration controls in place to ensure that the licensing bases, DBDs, as-built plant, and procedures remain consistent. These controls are described in detail in the previous sections of this letter.

A key attribute of the configuration management programs is their interactive nature. For example, as structured, a proposed design change is required to receive reviews not only for technical adequacy but for impact on other organizations and programs, including the design bases. The products of these reviews are required in turn to receive similar impact reviews to assure overall consistent implementation occurs. Correspondingly, a proposed procedure change is required to receive technical and impact reviews, as appropriate, to assure compliance with design and licensing bases requirements are maintained, needed design

changes are identified, and overall consistent implementation occurs. Similarly, a proposed FSAR change receives technical review to assure the change is appropriate. Superimposed on these activities are the 10CFR50.59 review process (as discussed in section III.A.3 above) and the Quality Assurance Program, to provide reasonable assurance of proper implementation of controls, checks, and balances.

The programs that were in place at the time of licensing and which were judged to provide confidence that compliance with the design bases would be maintained through the licensed life of CPSES remain substantially in place today. Key elements of these programs are described in preceding sections of this letter. While a number of changes to improve these programs have been made since initial licensing, the key elements for configuration management remain essentially unaffected. Many of the changes made were in response to self assessments and lessons learned from program implementation and represent process improvements. Others have been made in response to shortcomings identified by internal evaluations and regulatory inspections. These changes contribute to enhanced confidence in the effectiveness of these programs by addressing identified shortcomings.

Evidence of the effectiveness of these programs comes from many sources as described in preceding sections of this letter. The continued overall positive results of the vertical slice type inspections conducted internally demonstrate that SSC configuration is being maintained and that operating, testing, and maintenance procedures are controlling activities in an acceptable manner. Similarly, satisfactory routine test results substantiate that SSC functional capability is being maintained through operating and maintenance practices. The overall results of internal self assessments and independent evaluations conducted by the Nuclear Overview Department provide added confidence in the successful functioning of the configuration management programs.

A number of instances have been identified where the configuration management programs were not completely successful in preserving design bases functional capabilities. Included in this population of problems were the Auxiliary Feedwater System check valve backleakage problems identified prior to Unit 1 licensing, Containment Spray System vibration problems, Turbine Driven

Auxiliary Feedwater Pump reliability problems brought about by governor valve problems, Spent Fuel Pool cooling capacity limitations identified in preparation for refueling activities, and internally identified Radioactive Waste System operational practices not completely consistent with FSAR assumptions. In each of these cases and others, when the problems were identified they were documented and evaluated, an appropriate course of action was established to resolve them, the causes of the problems and the generic implications of the problems were identified, as appropriate, and actions were taken to address those causes and generic implications. These actions generally resulted in improvements to the configuration management programs and the capabilities of the personnel implementing those programs.

Personnel are a key element in assuring the continued successful implementation of processes that can potentially impact compliance with a design bases requirements. As the processes have improved since initial licensing, so has the performance of the personnel implementing those processes. Experience has been gained and training conducted, in many cases based on operating experience at CPSES or from elsewhere in the industry. Additionally, as the processes have changed, training has typically been conducted in the process improvements. This overall improvement in personnel performance is demonstrated in the long-term reduced rates of personnel errors and significant personnel errors. Performance in this area is closely monitored and improvement efforts undertaken when necessary.

In summary, we conclude that, collectively, the information cited in the previous sections of this letter and summarized above provides reasonable assurance that CPSES was constructed consistent with its design bases at the time of licensing of both units. We also conclude that this information provides reasonable assurance that the programs in place at the time of licensing were capable of maintaining compliance with the design bases in the post-licensing environment. Changes made have not substantially altered the successful key elements of the programs and have generally resulted in improved performance based on lessons learned or deficiency resolution. Corresponding improvements have been made in the capabilities of the personnel implementing these programs. The factual evidence derived from plant operation and testing, and from the various internal and external evaluations

performed provide assurance of the overall effectiveness of the current processes and programs in maintaining the configuration of CPSES consistent with the design bases.

Based on all of the above, we conclude that there is reasonable assurance that the plant configuration and performance are consistent with the design bases.