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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
631 PARK AVENUE  
KING OF PRUSSIA, PENNSYLVANIA 19406

February 22, 1985

MEMORANDUM FOR: Vincent S. Noonan, Project Director, Comanche  
Peak Technical Review Team

FROM: Richard R. Keimig, Comanche Peak Technical  
Review Team Test Program Group Leader

SUBJECT: DOCUMENTATION OF TELEPHONE CONFERENCE WITH  
TUEC PERSONNEL

On January 31, 1985, at about 2:30 p.m., I initiated a telephone conference among TUEC's M. Wise, R. Camp and S. Franks and W. F. Smith, NRC Resident Inspector (Operations) - Comanche Peak, to discuss the results of Mr. Smith's and my preliminary review of the draft revisions to the Issue-Specific Action Plans. The draft revisions were provided to me by Mr. Wise on January 17 (see my memo to you dated January 25, 1985) and are attached (Attachment 1).

I advised the parties that our review was conducted to determine the degree of completeness with which TUEC had addressed the TRT Test Program Group's concerns as they currently exist. As additional concerns arose out of findings from the other TRT groups, TUEC would be notified and these would also have to be addressed. Therefore, our review should not be considered final or as the NRC's official position. The following points were discussed:

Item Number III.a.1., Paragraph 3.1

- o Total number of hot functional tests (HFTs) - Because there is a difference between the total number of HFTs which appears in TRT documents (25) vice TUEC documents (24), I decided to resolve the issue, for the record, during this conversation. There are 23 pre-operational tests and 5 acceptance test considered to be HFTs, for a total of 28. The TRT reviewed 15 pre-operational tests and 2 acceptance tests during its review of the HFTs. Therefore, the TRT documents should state that 17 of 28 HFTs were reviewed. All parties agreed.
- o 1CP-PT-34-05 and 1CP-PT-55-05 - TUEC's discussion of these pre-operational tests does not address the TRT's concern, i.e., that the retest specified in each case did not acknowledge that a test objective wasn't met and provided no accountability for that discrepancy. TUEC personnel stated that the administrative requirements for TDRs would be changed to provide accountability and the action plan would be revised accordingly.

Paragraph 4.1.6

- o Definition of "single reject" - unclear. TUEC personnel stated that it would be clarified.

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Item Number III.a.2., Paragraph 4.1

- o Amended FSAR not addressed - TUEC's discussion does not address a change to the FSAR which the TRT considered necessary to reflect that the SORC and not the JTG will perform reviews of deferred pre-operational testing data. Mr. W. F. Smith explained that he had reviewed the documents identified in TUEC's discussion and considers that the review and approval process is now clear; additionally, an amendment to the FSAR had been submitted which further ensures the clarity of the issue.

Item Number III.a.4., Paragraph 2.0

- o Action identified is incomplete - The required action intended by the TRT also included assurance of test and measuring equipment traceability during plant operations. TUEC pointed out (correctly) that this was not included in the September 18, 1984 NRC letter. I apologized for the oversight but stated that it is included in SSER No. 7 to which TUEC will have to respond. TUEC stated that it would be addressed, as necessary.

Paragraph 3.0

- o Confusing - This paragraph introduces information which is irrelevant to the issue and, therefore, tends to confuse the issue. TUEC stated that the discussion would be reviewed in an attempt to ensure clarity.

Item Number III.b.

- o Incomplete - The TRT's generic concern arising from this issue was apparently not understood by TUEC. The TRT is not only concerned about the deviation from the FSAR with regard to the containment integrated leakrate test but also the potential for other FSAR deviations to have occurred without being documented during construction and testing. TUEC stated that this had not been understood but that it would be addressed.

Item Number III.c., Paragraph 4.1.3

- o Incomplete - This action does not address all test support personnel - only the ETGs. Additionally, the instruction is poorly stated; it is not that test support personnel are not responsible for validation of test prerequisites, but rather, that they may not validate test prerequisites. TUEC stated that this would be reviewed.

Item Number III.d

- o The TRT's position has changed as a result of findings of QA/QC Group (see my memo to you dated January 25, 1985) - I reiterated that, as a result of the findings of QA/QC Group concerning document control problems, the TRT Test Program Group can not rely on its limited review that there were no adverse effects on the testing program because of document control inadequacies. TUEC must propose a method to NRC to determine whether the testing program could have been affected by document control problems in order to resolve this issue. This matter is discussed in SSER No. 7. TUEC stated that the matter would be addressed.

The telephone conference ended at about 4:30 p.m.

  
Richard R. Keimig, RT  
Test Programs Group Leader

ITEM NUMBER III.a.1

Hot Functional Testing (HFT) Data Packages

1.0 Description of Issue Identified by NRC

The TRT reviewed a sample of the completed data packages for HFT preoperational test procedures, pertinent startup administrative procedures, NRC inspection reports, and the preoperational test index and its schedule. The TRT also inspected test deficiency reports (TDRs) that were generated as a result of test deficiencies found prior to and during HFT.

Chapter 14 of the FSAR and Regulatory Guide 1.68 provide requirements for the conduct of preoperational testing. In reviewing test data packages, the TRT found that certain test objectives were not met. It appears that the joint Test Group approved incomplete data packages for at least three preoperational hot functional tests. These were:

<u>Test Procedure</u>	<u>Deficiency</u>
ICP-PT-02-12, "Bus Voltage and Load Survey"	Because acceptable voltages could not be achieved with the specified transformer taps, they were changed. A subsequent engineering evaluation required returning to the original taps, but no retest was performed.
ICP-PT-34-05, "Steam Generator Narrow Range Level Verification"	Level detectors 1-LT-517, 518 and 529 were replaced with temporary equipment of a design that was different from that which was to be eventually installed.
ICP-PT-55-05 "Pressurizer Level Control"	Level detector 1-LT-461 appeared to be out of calibration during the test and was replaced after the test. The retest approved by the JTG was a cold calibration rather than a test consistent with the original test objective, which was to obtain satisfactory data under hot conditions.



ITEM NUMBER IIX.a.1  
(Cont'd)

2.0 Action Identified by NRC

Accordingly, TUEC shall review all complete preoperational test data packages to ensure there are no other instances where test objectives were not met, or prerequisite conditions were not satisfied. The three items identified by the TRT shall be included, along with appropriate justification, in the test deferral packages presented to the NRC.

3.0 Background

- 3.1 It is our understanding that the TRT performed a review of 17 of the 24 hot functional (simulated operating plant) test (HFT) procedures and resultant data to determine conformance with the FSAR and Regulatory Guide 1.68. The team questioned the adequacy of retest specified on TDRs associated with the tests, in that, temporary instruments were used for the test (ICP-PT-34-05) which did not satisfy prerequisite test conditions and that subsequent tests were not specified such that Regulatory Position C.3 of Regulatory Guide 1.68 Rev. 2 were addressed. Similarly, instrumentation was replaced after the test (ICP-PT-55-05) and the retest specified did not address the same regulatory position. Installed and tested configuration of transformer taps (ICP-PT-02-12) were changed and retest for the associated TDR specified no retest.

TDRs are issued when unacceptable or indeterminate conditions exist in the operating characteristics, test documentation or for procedure noncompliance. In cases where TDRs are issued to describe equipment problems, corrective actions are established and additional retest are considered to ensure adequacy of actions taken to correct the problem in addition to consideration of preoperational test requirements. TDRs contain a description of the problem, the corrective action and retest requirements, as applicable. A description of the three specific procedure concerns follows:

Prior to initiation of test, ICP-PT-02-12 "Bus Voltage and Load Survey", it was determined that the 480V motor control centers (MCC) were not within the required voltage levels. To ensure that optimum current and voltage will be present at all buses and subsequent equipment, transformer taps are provided for voltage regulation. Therefore, the 6.9kv to 480 volt transformer taps were changed in order to bring the 480 volt MCC's within acceptable levels. A note contained in the procedure states, "If voltage measured during this test is not in accordance with acceptance criteria of section 2.0, adjust tap settings for proper voltage and reperform affected section

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(Cont'd)

of test. Tap adjustment may also be performed at completion of test." Upon completion of the test, review of the test data revealed that 6.9kv bus voltages, being supplied by the 138kv startup transformer, were outside the acceptance criteria as specified by the procedure. TDR No. 1189 was initiated and forwarded to TUEC Engineering for evaluation. Engineering provided a response to the TDR which stated that the tap setting on the 6.9KV to 480 volt transformers must be returned to -5% and that steps should be taken to preclude prolonged bus over voltages by increasing plant loads and regulating grid voltages within acceptable limits. Plant operations was subsequently requested to establish administrative controls to ensure that bus voltages are maintained within acceptable limits. No retest was specified based on this request and the fact that proper transformations, from 138kv and 345kv to 480 volt, were demonstrated during the test and that both the 6.9kv and 480 volt buses would be within limits if the incoming grid voltages were within limits. However, since the transformer taps were changed after completion of the test and no retest was performed, test data is not available for the final as installed condition. Upon identification of the technical review team's finding, TDR No. 3226 was initiated to re-evaluate and confirm the disposition for TDR No. 1189 in order to fully substantiate the adequacy of the test data package or specify corrective action to be taken.

The objective of preoperational test ICP-PT-34-05 "Steam Generator Narrow Range Level Verification" is to demonstrate that the setpoints for alarms and channel trips are actuated at the design values and that the level channels compare properly with each other for actual changes in steam generator water level. Additionally, the test demonstrates that each of the level channels indicate properly at the upper and lower instrument taps to confirm that the correct span between the level taps on the steam generators was used for the instrument calibration. Prior to conduct of the test, TDR No. 635, 709 and 732 were written to document three defective Barton, (Model 764) instruments. Due to the long lead time required for repair of the defective instruments, Rosemount (Model 1163) instruments were installed on a temporary basis and calibrated to facilitate conduct of HFT. Each of the four steam generators are provided with four transmitters that provide four distinct level indications in the control room. Two temporary transmitters were utilized on steam generator No. 1 and one temporary transmitter was installed on steam generator No. 2. A comparison of the temporary transmitter data with permanent transmitter data is contained within the test results. These values reveal proper span of the instrument taps on the steam generators, as required by the test objectives, and confirm the adequacy of the permanent Barton (Model 764) instruments.

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HFT testing was completed with the above mentioned temporary transmitters installed. After HFT, the permanent Barton transmitters were installed. The specified retest for the three defective permanent Barton transmitters required normal calibration to ensure that the instrument would perform its design function over its entire range which is in accordance with industry practice. It is additionally important to note that technical specifications require a verification of proper indication be documented on each shift (every eight hours) for the applicable modes of operation. This requirement will further ensure the detection and correction of abnormal instrument behavior.

Preoperational Test ICP-PT-55-05 "Pressurizer Level Control" demonstrated the capability of the pressurizer level control and Chemical and Volume Control systems to maintain pressurizer level in the manual and automatic modes of operation. During review of the test results, TDR No. 1232 was initiated to document that data recorded on Data Sheets 6 and 8 was thought to be inconclusive and thus did not satisfy notations on the test data sheets and the acceptance criteria as specified in paragraph 2.1 of the test procedure. Test data indicated that upon return to low (approximately 0 to 5% indication) pressurizer level, the Digital Volt Meter (DVM) readings for the 1-LT-461 channel did not agree within  $\pm 2\%$  of a "zero" level and the DVM readings for each of the three channels did not agree within 4% deviation of each other. Although test personnel incorrectly interpreted the acceptance criteria, the data did indicate a possible out-of-calibration condition in the 0% to 5% range. All other data outside of the 0 to 5% range was acceptable. Upon further investigation into the cause, the instrument calibration was checked and found to be unsatisfactory. Attempts to obtain a satisfactory calibration were unsuccessful causing the instrument to be replaced with an identical type of instrument. Normal calibration of the replacement instrument and loop components was specified as the required retest to demonstrate that the instrument would perform its design function over its entire range and was completed satisfactorily. Similar to the steam generator level issue, technical specifications will govern the operability of these instruments during the applicable mode of operation. As another note, the data in question does not invalidate the ability of the control system to operate properly in that the questionable data was taken to confirm adequacy of the instrument calibration and the questionable data is outside the normal control band of the control system.

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(Cont'd)

As of September 17, 1984, there were 163 preoperational tests that had been completed and approved by the Joint Test Group (JTG). Twenty-four (24) of those approved were related to Hot Functional Testing and the balance (139) were not associated with Hot Functional Testing. Since the TRT performed a review of 17 of the 24 tests related to hot functional testing and expressed no concern with 14 of the 17 reviewed, we feel that additional review of these 14 is not justified in that further review would only contribute to further substantiation of their adequacy. However, additional review will be performed on the remaining seven hot functional tests as well as the three of concern in order to complete a 100% review of that category of test. In order to reconfirm the adequacy of the remaining preoperational tests we do not feel that a 100% review is necessary to increase our level of confidence in their adequacy. Therefore, the action plan (section 4.0) is designed to perform a sample review of the remaining 139 tests that are not related to HFT.

TUEC has designated the JTG to perform the re-evaluations required by the action plan. The JTG membership is knowledgeable of the plant design, FSAR requirements and the test program requirements and procedures. The membership of the group has sufficient organizational freedom and diversity to assure that objectivity will be maintained. In addition, an individual, who has not had any previous involvement with test program activities, has been selected to provide independent monitoring, review and approval of JTG activities relating to the required TRT issue - specific action plans.

Special review guidelines, Attachment 1, have been developed that expand current review criteria to focus on the specific TRT concerns. These guidelines will be utilized by the JTG for re-evaluation of completed preoperational test data packages and they will be incorporated into the applicable Startup Administrative Procedures to assure that the concerns expressed by the TRT are addressed in a consistent manner during future procedure reviews.

With respect to Regulatory Position C.3 of Regulatory Guide 1.68, Revision 2, the current test program requirements establish the need for permanent plant equipment to be installed and applicable prerequisite (construction) type testing to be completed prior to conduct of a preoperational test. Where permanent plant equipment is not installed, a TDR



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is initiated to document and establish corrective action and retest requirements for the condition. The determination of the practicality of proceeding with the test is the responsibility of Startup management. Retest for these cases are specified with respect to the objective of the pre-operational test, function of the equipment and knowledge of other program requirements, such as surveillance tests, and future plant conditions required for completion of the initial test program (preoperational and initial startup) by Regulatory Guide 1.68, Rev. 2. The additional review guidelines developed for completed preoperational test data package re-evaluation will emphasize consideration of Regulatory Position C.3 of Regulatory Guide 1.68, Revision 2, for retest specified for TDRs which document missing permanent plant components during conduct of preoperational tests.

If adequate justification cannot be provided for the actions taken with regard to the three procedures discussed above, or as a result of additional or similar discrepancies identified during the review process, retests will be performed as required.

- 3.2 The preliminary reviews conducted to date have not identified a root cause for this item. Implementation of the action plan is necessary before a root cause determination can be made. Generic implications will be evaluated based on the results of the implementation of the action plan and the results of the root cause determination.

4.0 TUEC Action Plan

4.1 Scope and Methodology

- 4.1.1 Initiate Test Deficiency Reports on ICP-PT-34-05 and ICP-PT-55-05 to fully document the results of their re-evaluation.
- 4.1.2 The completed test data package for ICP-PT-02-12 "Bus Voltage and Load Survey" will be re-evaluated using the guidelines provided by Attachment 1.
- 4.1.3 The completed test data package for ICP-PT-34-05 "Steam Generators Narrow Range Level Verification" will be re-evaluated using the guidelines provided by Attachment 1.
- 4.1.4 The completed test data package for ICP-PT-55-05 "Pressurizer Level Control" will be re-evaluated using the guidelines provided by Attachment 1.

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4.1.5 The seven (7) remaining HFT preoperational test data packages that were not previously reviewed by the TRT will be re-evaluated using the guidelines provided by Attachment 1. A TDR will be issued for each of the seven procedures to fully document the review results. The seven procedures to be reviewed are as follows:

- a. ICP-PT-02-13 Power Transformer Load Test
- b. ICP-PT-02-14 480V Switchgear Transformer Load Test
- c. ICP-PT-37-03 Auxiliary Feedwater Turbine Driven Pump
- d. ICP-PT-45-06 Containment and Pump Room Coolers Temperature Test
- e. ICP-PT-49-02 Sealwater and Letdown Flow Performance
- f. ICP-PT-49-05 Boron Thermal Regeneration System
- g. ICP-PT-74-02 Incore TC and RTD Cross Calibration

4.1.6 The 139 remaining preoperational test data packages not associated with HFT that were completed (approved) as of September 17, 1984, will be re-evaluated on a sample basis using the guidelines provided by Attachment 1. Twenty (20) procedures pertaining to systems and/or components considered to be most important to safety will be selected for the first sample. Upon identification of a single reject, a second sample of another 20 procedures will be selected. If a reject is identified from the second sample, all remaining tests will be re-evaluated.

A TDR will be issued for each of the procedures to be reviewed to fully document the review results. Any TDR dispositioned by the JTG that requires a retest to be performed to satisfy a test objective or FSAR commitment will constitute a reject.

As described by Regulatory Guide 1.68, Revision 2, both Appendices A and B to 10CFR Part 50 recognize that some structures, systems and components are more important to safety than others. Structures, systems and components designated as Seismic Category I are exemplified as being more important to safety than other structures, systems and components that are also important to safety.



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Therefore, based on the guidance provided by Regulatory Guides 1.68, Revision 2, and 1.29, Revision 3, the following 20 completed test procedures have been selected by the JTG and approved by the CPRT Testing Programs Review Team Leader for the first sample:

1CP-PT-01-03	125 Volt DC System
1CP-PT-02-01	118 Volt AC Class 1E Inverters
1CP-PT-02-10 RT1	480 Volt Class 1E Switchgear and Motor Control Centers
1CP-PT-02-17	6.9KV and 480 SWGR Under Voltage Functional Test
1CP-PT-04-01	Station Service Water
1CP-PT-07-01	Control Room Heating and Ventilation System
1CP-PT-29-02 RT1	Diesel Generator Control Circuit Functional and Start Test
1CP-PT-29-04	Diesel Generator Sequencing and Operational Stability Test
1CP-PT-37-01 RT1	Auxiliary Feedwater System (Motor Driven Pumps)
1CP-PT-48-01	Containment Spray System
1CP-PT-49-01	Letdown, Charging and Sealwater System
1CP-PT-57-01 RT2	Safety Injection Pump Performance - Retest
1CP-PT-57-02	Centrifugal Charging Pump Test
1CP-PT-57-05	Safety Injection Accumulators Test
1CP-PT-57-06	RHR ECCS Performance
1CP-PT-57-08	Integrated SI-Emergency Power
1CP-PT-58-01	Residual Heat Removal System
1CP-PT-64-02 RT1	Reactor Protection System Retest
1CP-PT-64-07	Solid State Safeguards Sequencer System
1CP-PT-64-10	Safeguards Actuation Relay Test

Where retests (RT) have been performed after the original performance of a test, the scope of each test (e.g., original, RT-1, RT-2, etc.) was evaluated to ascertain which test was the most significant to safety.

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(Cont'd)

- 4.1.7 Since the selection of the sample sets of 20 procedures is not performed on a random basis, an additional re-evaluation process will be implemented if it is not necessary to expand the review beyond 40 procedures, as described above. The attributes being re-evaluated, i.e., FSAR commitments, TDRs and Test Procedure Deviations (TPDs), will be totaled for the remaining procedures. This total will be the population to be processed in accordance with Comanche Peak Response Team procedure No. 11, "Definition of Depth and Breath of NRC Identified Deficiencies." This procedure specifies requirements for sampling plans for inspection by attributes selected on a random basis.

4.2 Responsibilities

- 4.2.1 The JTG members, or their designee, qualified to review preoperational test results and who did not perform the original review, will be responsible for re-evaluation of completed preoperational test data packages.
- 4.2.2 The JTG will be responsible for specifying corrective actions and retest requirements for all TDRs issued as a result of this re-evaluation. Conduct of all retests resulting from this review will be scheduled and in the case where the retests are not planned until after fuel loading, a request to defer the test will be submitted to the NRC.
- 4.2.3 The independent review team leader, or his independent designee, will monitor the review process to assure the objectives of this action plan are being met. He will also review and approve the final review results for each test package. The results of the independent monitoring and review will be documented in the Action Plan Results Report.

4.3 Personnel Qualifications

- 4.3.1 The JTG consists of the following members who are qualified for review and approval of preoperational test procedures and results as specified in the FSAR section 14.2.2.7.

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(Cont'd)

TUGCO Manager, Nuclear Operations - Chairman  
TUGCO Manager, Plant Operations - Vice-Chairman  
TUGCO Lead Startup Engineer  
TUGCO Nuclear Engineering Manager  
WESTINGHOUSE - Site Manager  
TUGCO Startup Manager

- 4.3.2 The CPRT Testing Programs Review Team Leader meets the qualifications described in the CPRT Program Plan.

4.4 Procedures

- 4.4.1 Requirements of Attachment 1 and the following procedures will be used for review of the completed preoperational test data packages and associated documents:

CP-SAP-1 Startup Administrative Procedures Manual  
CP-SAP-2 Startup Program Organization & Responsibilities  
CP-SAP-11 Review, Approval and Retention of Test Results  
CP-SAP-12 Deviations to Test Instructions/Procedures  
CP-SAP-16 Test Deficiency and Nonconformance Reporting  
CPRT-11 Definition of Depth and Breath of NRC Identified Deficiencies

4.5 Decision Criteria

The criteria used to re-evaluate completed preoperational test procedures are included in Attachment 1 and the procedures delineated in Section 4.4 including applicable portions of the referenced procedures. Closure of this item will be achieved after all action items identified in the preceeding sections are accomplished including the re-evaluation of all applicable preoperational test procedures, root cause and generic implications assessments made, and any additional identified corrective actions taken.

5.0 Schedule

<u>Action</u>	<u>Target Completion Date</u>
4.1.1	Complete
4.1.2	Complete
4.1.3	Complete
4.1.4	Complete
4.1.5	Complete
4.1.6	January 31, 1985 - 1st sample
4.1.7	Contingent upon results of action 4.1.6

ITEM NUMBER III.a.1  
Attachment 1

Guidelines for Re-Evaluation of  
Completed Test Data Packages

The following guidelines shall be used for re-evaluation of completed preoperational test data packages as required by TRT Action Plan III.a.1 to ensure:

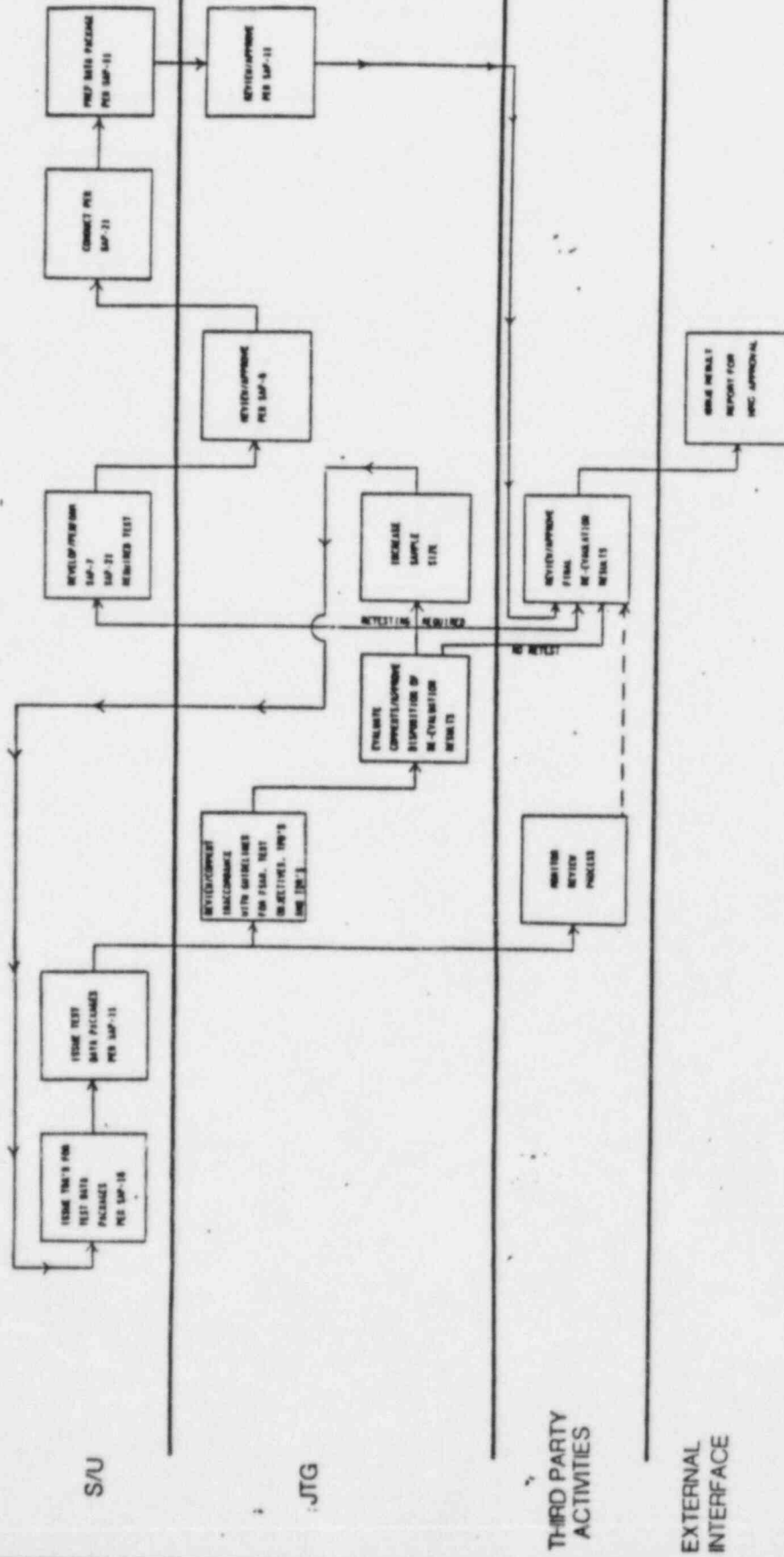
- 1.0 That the test satisfied applicable FSAR commitments;
- 2.0 That the test objectives were not invalidated as a result of Test Procedure Deviations (TPDs) that were issued during conduct of the test; and
- 3.0 That the test objectives were not invalidated as a result of inappropriate corrective actions or retests associated with Test Deficiency Reports (TDRs) issued during the test or as a result of test data package review.

NOTES:

- (1) Particular attention must be given to TPD's that were issued to modify test prerequisite (initial) conditions, or test methodology such that the stated test objectives could not have been attained under the "as tested" conditions or system configuration.
- (2) Particular attention must be given to TPD's that were issued to delete the requirement to have permanent plant equipment installed for test conduct or that substituted temporary equipment for permanent plant equipment before or during the test.
- (3) Particular attention must be given to the specified retest requirements for TDR's which documented permanent system component(s) that were not installed for conduct of the test or unacceptable test results with respect to the stated test acceptance criteria.
- (4) Regulatory position C.3 of Regulatory Guide 1.68, Rev. 2, states in part; "To the extent practical, the duration of the test should be sufficient to permit equipment to reach its normal equilibrium condition, e.g., temperatures and pressures, and thus decrease the probability of failures, including "run in" type failures, from occurring during plant operation." For each case where permanent plant equipment was not installed for the test, the JTG must judge on a case basis the acceptability of the test or retest requirements after the permanent equipment was installed with regard to the above regulatory position.

ISSUE III 1  
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ITEM NUMBER III.a.i  
Attachment 2



ITEM NUMBER III.a.2 .

JTG Approval of Test Data

1.0 Description of Issue Identified by NRC

The TRT noted during a review of HFT completed test data that the JTG did not approve the data until after cooldown from the test. The tests are not considered complete until this approval is obtained. In order to complete the proposed post-fueling deferred preoperational HFT, the JTG, or a similarly qualified group, must approve the data prior to proceeding to initial criticality. The TRT did not find any document providing that TUEC is committed to do this.

2.0 Action identified by the NRC

Accordingly, TUEC shall commit to having a JTG, or similarly qualified group, review and approve all post-fueling preoperational test results prior to declaring the system operable in accordance with the technical specifications.

3.0 Background

HFT related preoperational test results were informally reviewed by qualified test personnel prior to cooldown to ensure that required testing had been completed and that identified deficiencies that could be corrected had been corrected and retested. Although the JTG did not formally review and approve HFT related test results prior to cooldown, the JTG did review the status of HFT testing and test deficiencies in detail on a regular basis beginning several weeks prior to their final decision to cooldown from HFT. As described by the CPSES FSAR section 14.2.5, test results are required to be reviewed and approved before major test phases such as fuel load, initial criticality, etc. This methodology, as described in the FSAR, complies with the guidance provided by Regulatory Positions C.3 and C.4 of Regulatory Guide 1.68, Revision 2. Therefore, the fact that the JTG did not formally review and approve completed HFT test data prior to cooldown from HFT does not constitute a violation of FSAR commitments or deviation from regulatory requirements. The current station and initial startup administrative procedures comply with the FSAR and technical specifications with regard to declaration of system operability and test results approval.



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TUEC is committed to having all deferred preoperational test results reviewed by the SORC. The test deferral process is intended as a formal mechanism to defer necessary preoperational testing activities until after fuel load and to transfer the testing responsibility to the plant operations organization. The conduct of these deferred preoperational tests will be directed by the initial startup organization. This deferral process simultaneously closes the JTG's responsibility for this testing and transfers the review and approval responsibility to the SORC. Tracking of these deferred tests as well as the responsibilities of the SORC are identified in procedures STA-805, "Deferred Preoperational Testing" and ISA-005, "Initial Startup Test Package Preparation, Review, and Approval." These procedures are included as Attachments 1 and 2, respectively. | Δ

The SORC is the qualified group that is expected to review and approve all startup testing after fuel load, i.e. deferred preoperational tests and initial startup tests.

This role is identified in FSAR paragraph 14.2.5, "Review, Evaluation, and Approval of Test Results". The makeup and qualifications of the SORC are identified in FSAR Section 13.4.1. These meet the requirements of Regulatory Guide 1.68 Rev. 2 and the Standard Review Plan Section 14.2 which encompass both preoperational testing and initial startup testing. Additionally, it should be noted that all activities of the SORC are reviewed by the Operations Review Committee (ORC) which is described in FSAR paragraph 13.4.2.2. Qualifications of the ORC are also described in the FSAR.

The deferred preoperational test results will be reviewed in the same manner as other initial startup tests as delineated in Initial Startup Administrative Procedure ISA-005. This SORC review is specifically called out in the FSAR and Station Procedure STA-801, "Initial Startup Test Program," Attachment 3, to occur in the following manner (Ref. FSAR Section 14.2.5): | Δ

"Following each major phase of the test program test results and/or test status will be reviewed to ensure that all required tests have been performed and that the test results have been approved. This review will ensure that all required systems are operating properly and that testing for the next major phase will be conducted in a safe and efficient manner. This type of review will be performed to the extent required before major test phases such as fuel load, initial criticality, and power escalation. During the power escalation phase, review and approval of initial startup test procedure results will be completed for each of these plateaus (30 percent, 50 percent, and 75 percent) prior to proceeding with power ascension testing to the next plateau."

ITEM NUMBER III.a.2.  
(Cont'd)

4.0 TUEC Action Plan

4.1 Scope and Methodology

TUEC is committed to SORC approval of deferred preoperational tests per the above discussion. All deferred preoperational tests, except for the feedwater piping portion of the thermal expansion test, were planned to be completed prior to initial criticality with approval received from NRR via correspondence dated June 19, 1984 and August 17, 1984. Since submittal of Revision 0 of this plan, a decision has been made to perform another heatup prior to fuel load in order to complete thermal expansion retesting. During this heatup, all other previously deferred preoperational tests are planned to be completed. Since the plant systems involved have been final accepted by plant operations, this heatup will be conducted by plant operations and the deferred preoperational test will be conducted, reviewed and approved by the SORC, in accordance with the Initial Startup Administrative procedures.

Any additional deferred preoperational tests, that may be identified, will be approved in the same manner as described in Section 3.

It is assumed this additional information is sufficient to verify to the TRT that TUEC is committed to properly review and approve test results in the appropriate timely manner and that these commitments have been appropriately implemented in applicable procedures.

~~Therefore, this potential open issue does not constitute a deficiency requiring further investigation into root causes, evaluation of safety significance or imply any generic weakness.~~ This item is considered complete.

5.0 Schedule

Action  
4.1.

Target Completion Schedule  
Complete

ITEM NUMBER III.a.2

Attachment 1

STA-805 - Deferred Preoperational Testing

ITEM NUMBER III.a.2

Attachment 2

ISA-005 - Initial Startup Test Package  
Preparation, Review and Approval

ITEM NUMBER III.a.2

Attachment 3

STA-801 - Initial Startup Test Program



ITEM NUMBER III.a.3.

Technical Specification For Deferred Tests

1.0 Description of Issue Identified by NRC

The TRT pointed out that in order to conduct preoperational tests at the necessary temperatures and pressures after fuel load, certain limiting conditions of the proposed technical specifications cannot be met, e.g., all snubbers will not be operable since some will not have been tested.

2.0 Action Identified by NRC

Accordingly, TUEC shall evaluate the required plant conditions for the deferred preoperational tests against limiting conditions in the proposed technical specifications and obtain NRC approval where deviations from the technical specifications are necessary.

3.0 Background

To date, TUEC has submitted seven deferred preoperational test authorization requests to NRR. The processing of these requests were in accordance with station procedure STA-805, "Deferred Preoperational Testing". The TUEC action plan response to TRT issue III.a.2 briefly describes the deferred preoperational test process, as controlled by Station Administrative Procedure STA-805. During this process, technical specification requirements are evaluated and the need for technical specification exceptions is also considered. This evaluation addresses the operability requirements of the technical specifications and the impact of incomplete preoperational testing on equipment operability. Also, the required plant conditions for conducting these deferred preoperational tests are assessed against the CPSES technical specifications, including the limiting conditions for operation (LCO's). The results of these evaluations revealed that no technical specification deviations (exceptions) were required. Authorization to perform the above mentioned deferred testing prior to initial criticality has since been formally received by TUEC from NRR via letters dated June 19, and August 17, 1984. Since submittal of Revision 0 of this plan, a decision has been made to perform another heatup prior to fuel-load in order to complete thermal expansion retests. During this heatup, all other previously deferred preoperational tests are planned to be completed. If the need arises to defer additional preoperational tests until after fuel-load, these tests will be evaluated as described above and approval to defer these tests including necessary technical specification deviations will be requested by TUEC.





ITEM NUMBER III.a.3 .  
(Cont'd)

4.0 TUEC Action Plan

4.1 Scope and Methodology

TUEC is committed to evaluate the plant conditions required for conduct (completion) of preoperational tests after fuel-load against limiting conditions in the technical specifications. Based on this evaluation, TUEC will request NRC approval of any necessary technical specification exceptions for both Units 1 and 2.

It is assumed this additional information is sufficient to assure the TRT that TUEC fully understands the issue and has established necessary procedures to assure compliance with applicable regulatory requirements. This item is considered complete.

5.0 Schedule

<u>Action</u>	<u>Target Completion Schedule</u>
4.1	Complete

ITEM NUMBER III.a.4.

Traceability of Test Equipment

1.0 Description of Issue Identified by NRC

Data for the thermal expansion tests (which have not yet been approved by the JTG) did not provide for traceability between the calibration of the measuring instruments and the monitored locations, as required by Startup Administrative Procedure-7. The information was separately available in a personal log held by Engineering.

2.0 Action Identified by NRC

Accordingly, TUEC shall incorporate the information necessary to provide traceability between thermal expansion test monitoring locations and measuring instruments. TUEC shall also establish administrative controls to assure appropriate test and measuring equipment traceability during future testing.

3.0 Background

It is acknowledged that the traceability between the calibration of temperature measuring instruments and the monitored locations were not documented in the test data package which is under review. The approved test procedure used for conduct of the test did contain requirements for recording pertinent data relating to the calibration of temperature measuring instruments to be used on the Reactor Coolant System. (These requirements were not deleted from the procedure by a subsequent revision as discussed during presentation of the TUEC program plan on October 23, 1984.) The requirements of the approved test procedure were not complied with during conduct of the test as required by CP-SAP-21 "Conduct of Testing". Instead, the personnel responsible for conduct of the test elected to create a log which relates the temperature measuring instruments to the monitoring teams that used the instruments. Additionally, the monitoring teams were assigned specific test packages which identified the locations that were monitored. Therefore, the instrumentation used can be correlated to the location by the known assignments of monitoring teams and specific test packages.

This failure to comply with the approved test procedure was discovered during the review process and Test Procedure Deviation No. 36 was issued to include in the test data package information that related specific test instrument identification numbers to the locations the test instruments were used. When it was identified by the TRT that traceability to calibration of the instruments was not included, Test Deficiency Report No. 3418 and Test Procedure Deviation No. 37 were issued and the required calibration data relating to the instrument identification numbers was included in the test data package.

ITEM NUMBER III.a.4  
(Cont'd)

The necessary administrative controls to prevent this type of occurrence were in use during conduct of the thermal expansion test. The root cause of this error is attributed to the engineering personnel temporarily assigned to startup for thermal expansion testing not being thoroughly familiar with startup administrative requirements for conduct of testing with regard to processing a Test Procedure Deviation as required by CP-SAP-12 when approved procedure requirements are deviated from.

The generic implications are that other test personnel may have deviated from approved test procedures without complying with startup administrative procedure requirements to document deviations from those procedures. Based on review of startup administrative procedure requirements and verifications that were made by the review team leader we have concluded that this is an isolated case which was caused by the temporary assignment of individuals who did not have a thorough day-to-day working knowledge of the test program administrative requirements. Additionally the data in question had not been finally reviewed and approved.

The data obtained by the temporary temperature measuring instruments was used for information only and was not used to judge acceptability of the test or to substantiate any engineering calculations. Therefore, the specific question has no safety significance.

4.0 TUEC Action Plan

4.1 Scope and Methodology

1. Documentation to provide traceability between the calibration of temperature measuring devices and locations where they were used has been included in the test data package.
2. In order to prevent reoccurrence, all startup personnel responsible for conduct of testing will be reinstructed on the existing startup administrative requirements applicable to the traceability of measuring and test equipment.
3. In order to prevent reoccurrence, all startup personnel responsible for conduct of testing will be reinstructed on the existing startup administrative requirements applicable to the use of Test Procedure Deviations.

ITEM NUMBER III.a.4.  
(Cont'd)

4. If there are personnel temporarily assigned to perform startup functions in the future, they will receive thorough training in all applicable Startup administrative requirements prior to the performance of such functions.

It is assumed this additional information satisfies the TRT concerns and requirements. Therefore, this potential open issue does not constitute a deficiency requiring further investigation into root causes, evaluation of safety significance or imply any generic weakness. This item will be considered closed upon completion of actions described above.

5.0 Schedule

<u>Action</u>	<u>Target Completion Schedule</u>
4.1-1	Complete
4.1-2	December 28, 1984
4.1-3	December 28, 1984
4.1-4	Complete

ITEM NUMBER III.b .

Conduct of the CILRT

1.0 Description of Issue Identified by NRC

The TRT reviewed the data package for CILRT performed on Unit 1, and discussed the conduct of the test with TUEC and NRC personnel who participated in or witnessed it. Apparently after repairing leaks found during the first two attempts, the third attempt at a CILRT was successful. It was successfully completed after three electrical penetrations were isolated because the leakage through them could not be stopped. Though the leaks were subsequently repaired and individually tested with satisfactory results, NRC approval was not obtained to perform the CILRT with these penetrations isolated. In addition, leak rate calculations were performed using ANSI/ANS 56.8, which is neither endorsed by the NRC nor in accordance with FSAR commitments.

2.0 Action Identified by NRC

Accordingly, TUEC shall identify to NRC any other differences in the conduct of the CILRT as a result of using ANSI/ANS 56.8 rather than ANSI N45.4-1972. Additionally, TUEC shall identify to NRC all other deviations from FSAR commitments.

3.0 Background

3.1 During the development of CPSES Unit 1 Containment Integrated Leak Rate Test Program, the calculation methods prescribed by ANSI N45.4 - 1972 i.e., the POINT TO POINT METHOD, and the TOTAL TIME METHOD, were evaluated against the current industry practice and standards. Based on this evaluation, CPSES elected to use the MASS PLOT METHOD as prescribed by ANSI/ANS 56.8 - 1981 for calculation of the Type A leakage rate because it more accurately represents the actual physical conditions of the containment during the test. In addition, during conduct of the Unit 1 CILRT, three electrical penetrations were isolated to permit successful completion of the test. Preoperational Test Procedure LCP-PT-75-02 Section 5.5 described the special conditions under which potentially excessive leakage paths were to be isolated and retested. A containment integrated leak rate test report was transmitted to the NRC in May, 1983 as required by 10CFR50 Appendix J. A supplement to the test report was transmitted to the NRC in July, 1983. The retest results of the electrical penetrations and attendant impact on the Unit 1 CILRT was provided in the test report and test report supplement. Due to an oversight, however, the CPSES FSAR was not amended to reflect these deviations from 10CFR50 Appendix J and ANSI N45.4 - 1972 prior to performance of the test.



ITEM NUMBER III.b  
(Cont'd)

Subsequent to the Technical Review Team's identification of this issue, the NRC staff sent a letter to TUEC dated August 27, 1984 which: evaluated and found acceptable the TUEC handling of the three leaking electrical penetrations, and requested additional information regarding the use of ANSI/ANS 56.8-1981. Based on that letter, the issue of the ANSI standard substitution will be listed as an open item in the SER identified as "Deviation to the integrated leak rate test methodology of ANSI N45.4 - 1972 committed to in the FSAR".

It is our understanding that responsibility for resolution of the technical aspects of this issue has been transferred from the TRT to the applicable NRR Review Branch. For information, the request for additional information is repeated as follows:

"It is stated in the FSAR that the methodology of ANSI N45.4 - 1972 will be used to conduct the ILRT. The staff Technical Review Team (TRT) has found that the methodology of ANSI/ANS 56.8 - 1981, instead of ANSI N45.4 - 1972, was used in performing the test; ANSI/ANS 56.8 - 1981, however, has not been endorsed by the staff. In reviewing the ILRT summary report, dated May 6, 1983, we note that the "mass-plot method" of ANSI/ANS 56.8 - 1981, was used to calculate the containment leakage rate. Although we find this acceptable, the applicant is requested to identify and justify any other differences in applying ANSI/ANS 56.8 - 1981 in lieu of ANSI N45.4 - 1972."

- 3.2 The major objective of this Action Plan will be to evaluate root cause and generic implications pertaining to the ANSI standard substitution and to implement appropriate corrective actions to prevent recurrence.

4.0 TUEC Action Plan

4.1 Scope and Methodology

- 4.1.1 The CILRT procedure ICP-PT-75-02 will be compared with the FSAR and ANSI N45.4 - 1972 to identify any differences other than the calculation method that may have been caused by the use of ANSI/ANS 56.8 - 1981.
- 4.1.2 Respond to NRC letter dated August 27, 1984, including submittal of the required FSAR Amendment.



ITEM NUMBER III.b ,  
(Cont'd)

4.1.3 To facilitate determination of root cause and also provide assurance that this issue will not reoccur, the administrative procedures and practices that govern FSAR change processing and compliance will be reviewed for adequacy and revised as required.

4.1.4 In order to determine the root cause and address the potential generic implications of this issue, preoperational test procedures will be reviewed to determine if other tests have been conducted that do not comply with FSAR commitments. This review will be conducted on a sample basis in conjunction with the Action Plan for Issue III.a.1. (e.g., compliance with FSAR test commitments will be an attribute for review in addition to compliance with test objectives).

4.2 Responsibilities

The following organizations and personnel will participate in the above actions:

- 4.2.1 The startup special projects group will prepare a CILRT commitment matrix which provides a comparison of the FSAR and ANSI N45.4-1972 requirements to the actual test as contained in the applicable portions of CILRT procedure ICP-PT-75-02.
- 4.2.2 Members of the JTG, or their designees, will review the above matrix for completeness and determination of other differences that may have been caused by the application of ANSI/ANS 56.8-1981 in lieu of ANSI N45.4-1972.
- 4.2.3 Results of the above review will be provided to the TUEC Licensing group for transmittal to the NRC.
- 4.2.4 The CPRT Testing Programs Review Team Leader will be responsible for review of administrative procedures and practices for FSAR change processing and compliance.
- 4.2.5 Review of preoperational test procedures to ascertain compliance with FSAR commitments will be conducted by the JTG in conjunction with the Action Plan for Issue III.a.1.

ITEM NUMBER III.b  
(Cont'd)

4.3 Personnel Qualifications

The JTG members and their designees meet the qualifications required for review and approval of preoperational test procedures and results as described in the FSAR Section 14.2.5.

The CPRT Testing Programs Review Team Leader meets the qualifications as described by the CPSES TRT Program Plan.

5.0 Schedule

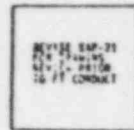
<u>Action</u>	<u>Target Schedule Completion</u>
4.1-1	Complete
4.1-2	Complete
4.1-3	Schedule per III.a.1
4.1-4	Schedule per III.a.1

# PREOPERATIONAL TESTING

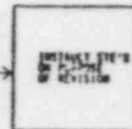
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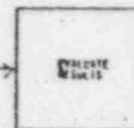
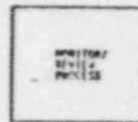
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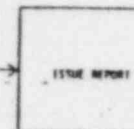
S/U QA SPECIALIST



THIRD PARTY  
ACTIVITIES



EXTERNAL  
INTERFACE



ITEM NUMBER III.b  
Attachment 1

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ITEM NUMBER III.c.

Prerequisite Testing

1.0 Description of Issue Identified by NRC

The TRT reviewed FSAR commitments, startup administrative procedures, prerequisite test records, craft personnel qualification records, and discussed them with startup and craft management personnel. The TRT also observed test support craft personnel at work and interviewed some of them to gain familiarity with their attitudes and capabilities.

The review of test records revealed that craft personnel were signing to verify initial conditions for tests in violation of Startup Administrative Procedure-21, entitled: "Conduct of Testing" (CP-SAP-21). This procedure requires this function to be performed by System Test Engineers (STE). Startup management had issued a memorandum improperly authorizing craft personnel to perform these verifications on selected tests.

2.0 Action Identified by NRC

Accordingly, TUEC shall rescind the startup memorandum (STM-83084), which was issued in conflict with CP-SAP-21, and ensure that no other memoranda were issued which are in conflict with approved procedures.

3.0 Background

3.1 Startup Administrative Procedure CP-SAP-1, "Startup Administrative Procedures Manual" allows the Startup Manager to issue interim changes or other necessary instructions as a temporary substitute with specific instructions concerning applicability and use. Instructions issued in this manner are required to be followed with a procedure revision.

The referenced startup memorandum (SIM-83084) is acknowledged to have issued directives contrary to the requirements of Startup Administrative Procedure CP-SAP-21 "Conduct of Testing" without a follow up administrative procedure revision as required by Startup Administrative Procedure CP-SAP-1.

Startup memorandum SIM-83084 authorized Electrical Test Group (ETG) personnel to validate prerequisites for Prerequisite Test Procedures XCP-EE-1 "Megger Testing" and XCP-EE-14 "Molded Case Circuit Breaker and Thermal Overload Relay/Heater Testing". Startup Administrative Procedure CP-SAP-21 requires the System Test Engineer (STE) to verify prerequisites prior to test conduct.

ITEM NUMBER III.c  
(Cont'd)

The consequences associated with improper validation of prerequisites for the affected tests are insignificant. Both tests are preliminary verifications which are made to detect damage and verify operability of items used for equipment protection prior to subsequent equipment energization and testing activities being performed. Failure to adequately verify completion of prerequisites or improper conduct of the affected tests would be detected during independent review and approval of the test results or during subsequent operation of the equipment.

During presentation of the TUEC test program action plans on October 23, 1984, TUEC was informed that additional activities are required for this action plan to determine if initial conditions for other Prerequisite Tests have been validated by craft personnel and if so, the affect of that activity on the adequacy of the test program.

As a result of this additional request, other prerequisite tests have been reviewed and it has been determined that initial conditions for certain prerequisite tests other than XCP-EE-1 and XCP-EE-14 were validated by personnel other than the STE. The results of this review will be evaluated to determine the cause, safety significance, necessary corrective and preventative actions, and the affect of this activity on the adequacy of the test program.

- 3.2 The preliminary reviews conducted to date have not identified a root cause for this item. Implementation of the Action Plan is necessary before a root cause determination can be made. Generic implications will be evaluated based on the results of the implementation of the Action Plan and the results of the root cause determination.

#### 4.0 TUEC Action Plan

##### 4.1 Scope and Methodology

- 4.1.1 Startup memorandum (SIM-83084) was rescinded by issuance of SIM-84220 dated September 25, 1984.
- 4.1.2 System Test Engineers will be instructed that SIM-83084 has been rescinded and that it is their responsibility to validate test prerequisites for the affected test as required by CP-SAP-21.
- 4.1.3 All ETC personnel will be instructed that they are not responsible for validation of test prerequisites.



ITEM NUMBER III.c  
(Cont'd)

- 4.1.4 All Startup Interoffice Memoranda (SIM) will be reviewed to determine if any other directives have been issued which conflict with requirements of the current revision of the Startup Administrative Procedures.
- 4.1.5 All prerequisite tests, with exception to those authorized by SIM-83084 will be reviewed to determine if other cases where craft personnel validated initial conditions for prerequisite tests exist. The results of this review will be reviewed by the test programs team leader to establish the safety significance of this concern and will be summarized in the Action Plan Results Report.
- 4.1.6 Evaluate results of review performed as specified by 4.1.5 above to determine the cause, safety significance, necessary corrective and preventative actions and the affect of that activity on the adequacy of the test program.

4.2 Responsibilities

- 4.2.1 The Startup Manager is responsible for rescinding Startup memorandum SIM-83084 and reinstruction of all STE's and ETG personnel with regard to their responsibilities.
- 4.2.2 All other Startup interoffice memoranda will be reviewed by the Startup Manager or the Startup Special Projects Group Supervisor.
- 4.2.3 The Startup QA Specialist will be responsible for reviewing prerequisite test results as required by paragraph 4.1.5 above.
- 4.2.4 The CPRT Test Programs Review Team Leader will be responsible for review of the results of the review performed as required by paragraph 4.1.5.

ITEM NUMBER III.c  
(Cont'd)

4.3 Personnel Qualifications

There are no special qualification requirements associated with this action plan.

4.4 Procedures

There are no procedures required for implementation of this action plan.

5.0 Schedule

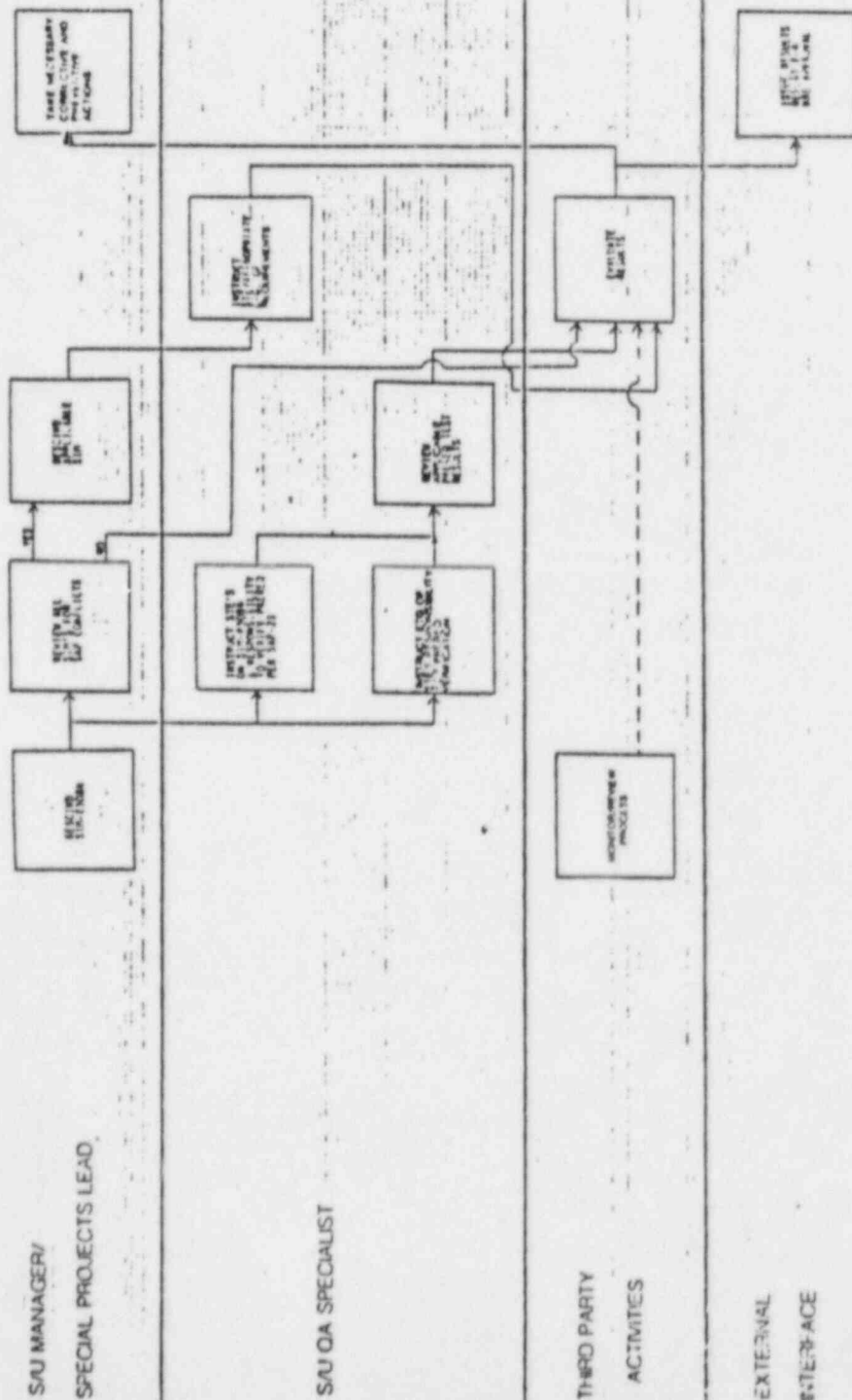
<u>Action</u>	<u>Target Completion Schedule</u>
4.1.1	Complete
4.1.2	Complete
4.1.3	Complete
4.1.4	Complete
4.1.5	Complete
4.1.6	January 18, 1985



PREREQUISITE TESTING

ISSUE III.C

REV. 1



ITEM NUMBER III.d .

Preoperational Testing

1.0 Description of Issue Identified by NRC

The TRT assessed the preoperational test program by reviewing administrative procedures, interviewing startup personnel, and examining test records, schedules, system assignments, subsystems definition packages, and the master data base.

Problems found with test data are addressed in section III.a of this enclosure. The TRT also found that STEs were not being provided with current design information on a routine, controlled basis, and had to update their own material when they consider it appropriate.

2.0 Action Identified by NRC

Accordingly, TUEC shall establish measures to provide greater assurance that STEs and other responsible personnel are provided with current controlled design documents and change notices.

3.0 Background

3.1 Actions associated with completed preoperational test data packages are addressed in Action Plan Item Number III.a.1. Startup personnel receive and utilize design documents that can be placed into either of two categories: design documents used for testing activities or design documents used for general information.

With regard to design documents used for testing activities, it is incumbent upon each STE to obtain and use current design information when required by approved test and/or Startup Administrative Procedures, not when he considers it to be appropriate. Current design documents are issued to the STE by the project Document Control Center upon request by the STE.

With regard to design documents used for general information, issuance of current information on a controlled basis is not necessary or required since these documents are not used for conduct of testing or other safety related activities. This category of design information that is held by the STE is not required by startup administrative procedures nor document control center procedures to be maintained current and may be updated by the STE when he considers it to be appropriate.

A

ITEM NUMBER III.d .

Preoperational Testing

Since the STE is administratively required to use the latest design information for conduct of tests and verification that procedures to be used for testing reflect the current design, it is our understanding that the TRT reviewers were concerned that this requirement may impose undue hardship on the STE at the time he is expected to start testing activities in that he may not already have the latest design information in his possession. A

In order to minimize the impact on personnel required to utilize the latest design information during the course of their job performance, TUEC established "satellite" document control centers to locate the latest design information physically as close as practical to the major work locations. Furthermore, a "satellite" document control center is established at the startup offices for convenience.

During presentation of the TUEC program plan on October 19, 1984, a discussion was held on document retrieval and document control at CPSES. As a result of this discussion, the TRT Test Programs Lead requested, during presentation of the TUEC test program action plans on October 23, 1984, that this action plan be modified to incorporate a review to determine if the "complex documentation system" affects documents used by Startup personnel or the adequacy of the test program. A

- 3.2 The preliminary reviews conducted to date have not identified a root cause for this item. Implementation of the Action Plan is necessary before a root cause determination can be made. Generic implications will be evaluated based on the results of the implementation of the Action Plan and the results of the root cause determination.

4.0 TUEC Action Plan

4.1 Scope and Methodology

- 4.1.1 In order to minimize the potential for oversight that may be caused by schedule pressure to start test activities, Startup Administrative Procedure CP-SAP-21 will be revised to include instructions for the STEs to implement the current requirement for review of test procedures to ensure that the test procedure reflects the design to be tested several weeks in advance of the schedule test start date. A



ITEM NUMBER III.d .

Preoperational Testing

- 4.1.2 Instruct the STE's on the new requirements of CP-SAP-21 to describe the purpose and provide other clarification as required for implementation.
- 4.1.3 Review the CPSES document control program and applicable startup administrative procedures to determine their adequacy and potential impact on test program activities.
- 4.1.4 Interview System Test Engineers to further assess the adequacy of the existing procedures and methods and determine if additional corrective actions need to be taken.

4.2 Responsibilities

- 4.2.1 The Startup organization will be responsible for revision of startup administrative procedures and instruction of STEs on new procedure requirements.
- 4.2.2 The CPRT Testing Programs Review Team Leader will be responsible for evaluation of the CPSES document control program and applicable startup administrative procedures and control methods. He will review and concur with Startup Administrative Procedures revised in accordance with 4.1 above.

4.3 Personnel Qualifications

The CPRT Testing Programs Review Team Leader meets the qualifications as described by the CPSES TRT Program Plan.

4.4 Procedures

The following procedures will govern revision of startup administrative procedures and indoctrination of revised procedure requirements:

- CP-SAP-1, Rev. 8 Startup Administrative Procedures Manual
- CP-SAP-19, Rev. 5 Training/Qualification Requirements for Startup Personnel

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Preoperational Testing

5.0 Schedule

<u>Action</u>	<u>Target Completion Date</u>
4.1.1	Complete
4.1.2	January 18, 1985
4.1.3	January 25, 1985
4.1.4	January 25, 1985

1

# PREOPERATIONAL TESTING

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