OCT 9 1984

MEMORANDUM FOR: Annette Vietti, TRT

FROM: L. C. Shao, Civil/Mechanical Group Leader, TRT

SUBJECT: CIVIL/MECHANICAL GROUP INPUT TO 50.57 LETTER

Enclosed please find the Civil/Mechanical Group's input to the 50.57 letter previously requested by you. Enclosure 1 covers our input for the Civil/Structural issues, whereas the issues related to Mechanical/Piping area are addressed in Enclosure 2.

If you need further information or clarification regarding the subject input, I can be reached at Ext. 37908.

L. C. Shao

L. C. Shao, Group Leader
Civil/Mechanical Group, TRT

Enclosures: as stated

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SL/SGEB/NRR D. Jeng 10/5/84
MEB/NRR S. Hou 10/5/84
DD/DET/RES L. Shao 10/5/84

2266

The NRC Technical Review Team (TRT) investigated the requirements to maintain an air gap between concrete structures. Based on the review of available inspection reports and related documents, on field observations, and on discussions with TUEC engineers, the TRT cannot determine whether an adequate air gap has been provided between concrete structures. The TRT, therefore, concluded that Texas Utilities Electric Company (TUEC) has not adequately demonstrated compliance with FSAR Sections 3.8.1.1.1, 3.8.4.5.1 and 3.7.B.2.8, which require separation of Seismic Category I buildings to prevent seismic interaction during an earthquake. Accordingly, TUEC has been required to perform inspections and provide the results of analyses to demonstrate that Seismic Category I structures, systems, and components are safe in the as-built condition. Since inadequate separation could alter the dynamic response of Seismic Catebory I structures and in turn the systems housed within them, the staff cannot determine whether all systems needed for fuel load and certain precritical testing would be capable of withstanding the effects of the Safe Shutdown Earthquake (SSE) and remain functional. Therefore, this issue should be resolved prior to the issuance of a license to load fuel and conduct certain precritical testing.

The NRC Technical Review Team (TRT) investigated the seismic design of the ceiling elements installed in the control room. As a result of this review the TRT concluded that Texas Utilities Electric Company (TUEC) had not adequately demonstrated that the suspended ceiling, lighting fixtures and non-safety related conduit over the control room (which are classified seismic Category II or Non-Seismic by TUEC) are appropriately designed such that their failure would not adversely affect the functions of safety-related components in the control room or cause injury to operators. Accordingly, TUEC has been required to provide further analyses and evaluations to justify their design. Furthermore, TUEC has been required to provide the results of an analysis which demonstrates that the foregoing problems are not applicable to other Category II and non-seismic structures, systems and components elsewhere in the plant. Since the evaluation of this issue is not complete, the staff cannot determine whether all systems needed for fuel load and certain precritical testing would be capable of withstanding effects of the Safe Shutdown Earthquake (SSE) and remain functional. Therefore, this issue should be resolved prior to the issuance of a license to load fuel and conduct certain precritical testing.

50.57 Letter
TRT/Mechanical & Piping

1. Plug weld problem may weaken structural capability of pipe supports and cable tray supports, which is a potential safety concern.

2. Failure of non-seismic category I piping may impair safety function of seismic category I piping.

3. Lack of proper welding inspection criteria of NF supports may leave undersized welds undetected. Thus the structural capability of these systems may be indeterminate.

4. Inadequate bolting many impair structural capability of steam generator supports.

5. Inadequate provisions and procedures for supporting main steam line during flushing and temporary supports in general.

Response to 10 CFR 50.57(c)

1. Plug Welds

Systems: Could affect all systems.

Status: It was alleged that unauthorized and undocumented plug welds were fabricated in pipe and cable tray supports and base plates located throughout the plant including the South Yard Tunnel and Unit 2 Cable Spreading Room.

Recent Region IV inspections have verified 6 such plug welds in cable tray supports in Unit 2 Cable Spreading Room.

Evaluation is not complete and the operability of the systems cannot be assumed.

Relationship: This issue is an open ASLB issue. It is also an open TRT issue, i.e., an open staff licensing issue.

Safety Significance: The safety significance cannot be assessed at this time. Identification of the systems affects will be required before assessments can be made.

Response to 10 CFR 50.57(c)

2. Piping Systems Between Seismic Category I & Non-Seismic Category I Building

Systems: Main steam, main feedwater, auxiliary feedwater, containment, spray and other systems which pass between seismic category I and non-seismic category I buildings.

Status: This issue was identified in April 1984 by the CPSES Special Review Team (SRT). The SRT found that although the effects of seismic interactions of the buildings have been considered, the effects of other interactions have not been considered contrary to the FSAR section 3.7B.2.8 commitment.

Evaluation is not complete and the operability of the systems cannot be assessed.

Relationship: This issue is not an open ASLB issue. It is an open SRT and open TRT issue.

Safety Significance: Main Steam and Feedwater Systems

A loss of operability of a feedwater system during the interim startup testing could result in the inability to remove heat from the reactor coolant where operating in Mode 3.

A pipe break in either the main steam or feedwater piping could result in the blowdown of the associated steam generator and an attendant increase in core reactivity. The long term heat removal capability of the steam generator would be lost.

None of the above consequences would result in the core reaching criticality or in the release of radioactivity to the environment.

Others: See S. B. Burwell

Rsponse to 10 CFR 50.57

3. Skewed Welds on Pipe Supports

System: Could affect main steam, feedwater and any other Class 2 and 3 piping systems.

Allegation: Lack of written QC inspection procedures for skewed welds on pipe supports was initially identified in ASLB hearings and addressed by RIV report SG-445/82-14.

Status: The TRT determined that this issue had been addressed by the applicant by revising the procedures and reinspecting all affected supports. However, evidence was found that indicated certain types of skewed welds were not inspected to the revised procedures. The applicant is lacking documentation for their previous commitment, therefore this is an open issue.

Relationship: Skewed weld inspection was an item of contention before the Board because it was part of RIV report 50-445/82-14, but has since been closed by the Board. This issue is reopened by the TRT.

Safety Significance: The evaluation of the contentionis not complete and the staff cannot determine the operability of the systems affected. The TRT has identified the lack of inspection documentation and has concluded that this could result in undersized fillet welds. The type of pipe support design exhibiting the lack of inspection documentation is generic to all Class 2 & 3 pipe supports, but was popular on large diameter systems such as main steam. The assessment of safety significance cannot be performed at this time since the extent of the problem must be addressed by the applicant.

4. Cutting of Bolts on SG Upper Lateral Supports

System: Could affect main steam feedwater or any other system attached to the steam generators.

Allegation: The allegation contends that some anchor bolts in the steam generator upper lateral supports were shortened without proper authorization during installation of the beams because there was concrete in the hole.

Status: The TRT found evidence that the bolts were inadvertently ordered long with the intent to cut them to the correct length. The applicant could not produce any installation records for review by the TRT and could not produce any evidence of UT inspection of the bolts at the time of installation. This UT inspection was not required by procedure.

Relationship: This contention is currently not an open issue and the TRT is not aware whether it ever was open before the ASLB. It is related to one of the Walsh/Doyle contentions currently open before the Board, since it pertains to the steam generator upper lateral support.

Safety Significance: The evaluation of the contention is not complete and the staff cannot determine the operability of the system. The TRT does not know if the bolts have been cut short until a response is received from the applicant. The applicant already on its own initiative has issued an NRC to UT the suspect bolts. If substantiated the allegation has safety significance since it could mean failure of the upper lateral supports under SSE loading resulting in potential damage to the steam generator and associated piping.

Response to 10 CFR 50.57 (c)

5. Temporary Supports During Piping Installation

Systems: Affects Main Steam and Feedwater Systems - could affect all systems.

Status: It was alleged that a main steam line was forced into place using the main polar curve in Unit 1.

The TRT identified concerns regarding: 1) the effects of settlements at temporary supports during flushing of the main steam line and 2) the adequacy of temporary supports in general. The provisions of Gibbs & Hill Specification 2323-MS-100 do not provide adequate requirements for these two items.

Relationship: This was a necessity issue. It is a closed ASLB issue. It is an open TRT issue.

Safety Significance: Main Steam and Feedwater Systems

A Loss of operability of a feedwater system during the interim startup testing could result in the inability to remove heat from the reactor coolant where operating in Mode 3.

A pipe break in either the main steam or feedwater piping could result in the blowdown of the associated steam generators and an attendant increase in core reactivity. The long term heat removal capability of the steam generator would be lost. Howeve , the capability of the remaining three steam generators will be more than adequate to compensate for their loss.

None of the above consequences would result in the core reaching criticality or in the release of radioactivity to the environment.

Others: See S. B. Burwell

TUGCO ENGINEERING DIVISION	INSTRUCTION	REVISION	ISSUE DATE	PAGE
CONTROLLED COPY NO.	CP-EI-4.0-64	0	10-17-84	1 of 4
FOR INFORMATION ONLY FIELD VERIFICATION OF 2" DIAMETER AND SMALLER TRAIN "C" CONDUITS SUPPORT SYSTEMS	PREPARED BY Tim Wright APPROVED BY CR Hooton			

1.0 REFERENCES

1-A CP-EP-4.0 Design Control

2.0 GENERAL

2.1 PURPOSE

To establish the method and documentation necessary for Field Verification of the Support System installed for the 2" diameter and smaller Train "C" conduits. This instruction is established to assure compliance with the applicable provisions of Ref. 1-A.

2.2 SCOPE

This instruction is applicable to all Train "C" conduits 2" in diameter and smaller located in the Unit 1 and common areas of the plant which have been identified by Civil Engineering for Field Verification.

FOR OFFICE AND ENGINEERING USE ONLY

2.3 RESPONSIBILITY

2.3.1 General

The CP Project Civil Engineer is responsible for providing technical direction and administrative guidance to civil engineering organization. The CPP Civil Engineer is responsible for insuring work is performed in accordance with this instruction.

It shall be understood where a specific individual is identified by title or position in this instruction, or properly documented designee may be delegated to act in that capacity.

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R/267

2.3.2 Field Engineer

A member of Civil Engineering shall give direction and adminstrative guidance to team(s) of Field Engineers in the as-built walk-down (verification) of applicable Train "C" conduits. The Field Engineer shall provide sketches of conduit runs and their associated supports as directed by Civil Engineering.

2.3.3 Design Engineer

The Design Engineer will be responsible for the analysis of the as-built conduit information obtained from the Field Engineering walk-down. The Design Engineer in this instruction shall be Gibbs and Hill, Inc. and shall provide necessary documentation, calculations, etc., to ensure stability of the support systems which have been provided for analysis.

2.4 DESIGN CRITERIA

Generic design criteria is specified on DCA 5106 (ie., conduit span and support location criteria and suggested typical support details).

3.0 INSTRUCTION

3.1 WALK-DOWN

The Field Engineering walk-down effort shall obtain the following information from selected Train "C" conduit runs.

1. Individual Location Plan/Isometric Sketch for each conduit run with associated supports and conduit spans identified. Applicable dimensional tollerances and section cuts shall be included as required. Applicable miscellaneous conduit fittings (ie., LBD, BUB, BC, etc.) shall also be labeled and dimensioned on this sketch.

2. For each support on a conduit run, use separate sheet(s) for support details. For conduit supports built per details given on DCA 5106 (Generics), complete sheet as shown in Attachment 1 only. Other conduit supports not built per specified details shown on DCA 5106 (Special Supports) will require an additional sheet to as-built support details, members, connections, configuration and provide tribuatory spans and locations of other attached conduit (if applicable).

The Project Civil Engineer or his Designee shall coordinate the effort of the Field Engineer walk-down to ensure that the data obtained from the walk-down is compatable with information required for the Design Engineer to perform applicable analysis of the support system.

3.2 TRANSMITTAL OF DATA TO DESIGN ENGINEER

Data obtained for the field engineering walk-down shall be compiled by the Project Civil Engineer or his designee and transmitted to the Design Engineer for analysis. The cover sheet of the transmittal shall specify which conduits are included.

3.3 RESULTS FROM ANALYSIS

After completion of analysis by the Design Engineer, results shall be transmitted to the Project Civil Engineer along with associated calculations and other documentation required for review by the Project Civil Engineer or his designee.

Attachment 1

Check List for 2" Diameter and Smaller Train "C" Conduit Supports

SUPPORT LOCATION: Conduit Number and Size_____

Building and Room Number:_____

Support Elevation at Conduit Attachment_____(+6")

SUPPORT TYPE: [Field Engineer must have DCA 5106 (marked copy) with him during walk-down]

Generic: (Give page number support is detailed on DCA 5106)

Page_____ of 13 on DCA 5106 R.9

Do members agree with those shown in DCA?_____

Substitute Member Sizes:
(Provide small sketch if required)

CONDUIT CLAMP TYPE:
(For walk-down conduits only)

CONDUIT INFORMATION: (Only required when more than one conduit is attached)

Number and Size of Conduits being supported:_____
With associated trib. lengths (1/2 of adjacent spans)_____

Sketch locations of conduits attached to support in block at right.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DRAFT

OCT 2 3 1984

MEMORANDUM FOR: Darrell G. Eisenhut, Director
Division of Licensing

THRU: Vincent S. Noonan, Chief
Equipment Qualification Branch
Division of Engineering

FROM: R. C. Tang, Comanche Peak Technical Review Team (TRT)

References:
1. Diablo Canyon SER (NUREG-0675), Supplement No. 21, December 1983
2. Diablo Canyon SER (NUREG-0675), Supplement No. 22, March 1984
3. Diablo Canyon SER (NUREG-0675), Supplement No. 26, July 1984
4. Transcript for August 2, 1984 Commission meeting on discussion/possible vote on full power operating license for Diablo Canyon.

Attached for your review and approval are the proposed TRT draft procedures/guidance for conducting close-out interviews with allegers who have raised technical concerns or allegations regarding Comanche Peak.

Although this document has been written for use by the TRT and thus is applicable to handling allegations about Comanche Peak, you will note that little effort is needed later to expand it into an NRR/DL procedure for managing allegations and for conducting alleger interviews on other projects.

This document was prepared with the assistance of Charles Hofmayer of Brookhaven National Laboratory who is both an NRC consultant and a TRT reviewer. Discussions were also held with Larry Shao, TRT, and Richard Stark of your staff. In addition, copies were sent to Stu Treby and Joseph Scinto of ELD for their review. The ELD comments, if any, will be incorporated before the document is finalized.

R. C. Tang
Comanche Peak Technical Review Team (TRT)

Attachment:
As stated

cc: H. Denton
E. Case

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FOIA-85-59

R269

NRR PROCEDURES/GUIDANCE FOR CONDUCTING CLOSE-OUT INTERVIEWS WITH ALLEGERS REGARDING COMANCHE PEAK STEAM ELECTRIC STATION

Approved By:

_____ Date: _____

Vincent S. Noonan, Project Director
for Comanche Peak
Division of Licensing
Office of Nuclear Reactor Regulation

_____ Date: _____

Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

TABLE OF CONTENTS

1. Purpose

To establish the NRR procedures and guidance for implementing the NRC interim policy on management of allegations (Appendix A) dealing with: (1) conducting close-out interviews with allegers who have raised technical concerns or technical allegations about construction practices at Comanche Peak Steam Electric Station, and (2) preserving the confidentiality of these allegers.

2. APPLICABILITY

This document is prepared for use by the Comanche Peak Technical Review Team (TRT).

3. GENERAL PROVISIONS

3.1 All allegers will be interviewed in person to the extent practicable. Telephone interviews may be conducted if requested by the alleger or if preplanned and approved by the TRT Project Director. Reasons for conducting interviews by telephone should be documented, indicating the Project Director's approval, and placed in the individual allegation file.

3.2 During the investigation of an allegation, an alleger or TRT reviewer(s) may have identified other individuals who may be able to support or confirm the allegation. Recommendations regarding the need to interview these individuals, including the basis for the need, should be forwarded in writing to the TRT Project Director who will determine whether follow-up interviews are necessary. If a decision not to interview is made, it will be documented and placed in the file of the original allegation.

3.3 Instances where individuals contacted by the TRT decline to have in-person interviews should be handled as follows:

a. During the initial telephone contact, attempt to ascertain reason(s) for declining the interview and obtain the individual's current mailing address;

b. Arrange for telephone interview and if agreed, obtain interviewee's permission to record and transcribe the interview. Provide a copy of the transcript to the alleger; or,

c. Send a registered letter to the individual with return receipt requested confirming that this individual has been contacted and has declined to be interviewed, and summarizing his/her allegation(s) and the TRT findings. This letter should offer the individual the opportunity to review the summary and to contact the TRT for discussion should he/she decide to do so later.

3.4 All interviews with allegers are considered personal interviews. The TRT, therefore, is not obligated to provide public notice of these interviews including notification of the Applicants and intervenors.

3.5 Public inquiries regarding any contacts with allegers should be referred to the TRT Project Director for response.

4. INTERVIEW METHODOLOGY

4.1 All interviews will be recorded and transcribed.

4.2 Group leaders or their designees, appropriate TRT reviewers and a TRT Project Staff member must be present at each interview. Efforts should be made to minimize the number of participants at each interview.

4.3 Interviews with allegers should be conducted at public locations convenient to the allegers, such as nearby motels. Interviews at allegers' homes should be avoided, if possible.

4.4 If an alleger has many allegations involving more than one TRT reviewer, consideration may be given to conducting the interview at NRC Offices in Washington, D. C. These interviews should be broken into sessions in order to minimize the number of reviewers at each session.

4.5 Any out-of-town travel expenses incurred by the allegers in attending TRT close-out interviews will be paid for by the NRC. Requests and arrangements for such travel should be made by the group leaders in coordination with the appropriate TRT Project Director's staff. Prior written approval by the Director, Division of Licensing is required in all cases.

4.6 During a close-out interview, the TRT participants will discuss with the alleger the TRT's understanding of his/her allegation(s), the approach to resolution and the tentative conclusions reached. The alleger should then be asked to respond to the TRT findings and either indicate his/her agreement or identify any concerns he may have with the findings. In addition, the alleger should be asked whether he/she has new allegations, or whether he/she knows of others who may have allegations about Comanche Peak and have not come forward to the NRC/TRT.

4.7 At the conclusion of each close-out interview, the TRT representatives will prepare a brief written summary identifying highlights of this interview (not including the TRT general conclusion) and documenting any outstanding concerns of the alleger. The alleger should be requested to indicate his/her concurrence on the summary.

4.8 If during the interview the alleger disagrees with the TRT's findings and/or resolutions, or provides new allegations, the TRT representatives should make no commitments or judgements regarding such information. This matter should be left open at the conclusion of the interview. However, the TRT reviewer should obtain and document sufficient details for possible future follow-up. New allegations will be identified, tracked, evaluated and handled in accordance with the June 1984 TRT guidance (Appendix B) and the applicable guidance set forth in Section 6 below.

5. RESOLUTION AND FOLLOW-UP

5.1 For each close-out interview conducted, the group leader and appropriate TRT reviewer(s) will evaluate and recommend in writing to the TRT Project Director those allegations which can be closed out (including the basis for the recommendation) and those which require further investigations. Allegations which require further investigations, as well as any new allegations received should be handled as described in Section 6 below.

5.2 Letters signed by the TRT Project Director should be sent to all interviewed allegers stating the TRT general conclusions regarding each alleger's specific allegations. This letter should indicate that the TRT's detailed evaluations pertaining to his/her allegations will be provided at a later date in the form of an SSER.

5.3 SSER conclusions will not be published in final form until all available allegers are contacted, interviewed and findings discussed. However, this will not preclude the NRC/TRT from requesting additional information from the Applicants in order to complete its evaluations and from issuing interim SSERs documentating partial findings. This is also in keeping with the NRC practice to promptly notify applicants of outstanding information/ evaluation needs that could potentially affect the safe operation of their plant.

5.4 Once an allegation has been closed-out, all documentation pertaining to this allegation will be forwarded to the cognizant TRT Project Staff through the group leader. Included in the documentation should be a signed and dated statement by the group leader that he has reviewed the file, that all applicable procedures have been followed and that all requirements have been met. The TRT Project Staff will determine the proper disposition of the documents (e.g., PDR, Region IV, etc.)

6. MANAGEMENT OF UNRESOLVED ALLEGATIONS AND LAST MINUTE ALLEGATIONS

(See list of references on Page 14)

6.1 Allegations that require further investigations due to TRT discussions with allegers at close-out interviews, as well as any last minute allegations received by the TRT, should be managed in accordance with guidance specified in this section and the applicable guidance set forth in Appendix A, "Proposed NRC Manual Chapter 0517, Management of Allegations." These allegations should be properly prioritized by the group leaders according to their relative safety significances. This would prevent possible reviews of duplicated allegations, and would enable the TRT to utilize its resources on areas of greater safety significance.

6.2 In prioritizing these allegations, the TRT should identify those which should be pursued and resolved with the highest priority due to their significance regarding criticality and low power operation. Particular consideration should be given as to whether an issue raises a question regarding operability or indicates a deficiency in management or quality. During this process the following criteria should be considered:

and Appendix B, June 1984 Technical Review Team Guidance.

a. Has the issue been previously dealt with by the TRT or the Applicants, or is it now being dealt with?

b. Does the allegation appear to have any merit?

c. Does the allegation represent a significant safety or management concern?

d. Does the allegation have any generic implications regarding safety or quality?

6.3 If an allegation is determined to be of no merit by the TRT reviewer/group leader and thus not warranting further pursuit, the group leader should document a detailed description of the allegation and the basis for the determination. This document should be presented to the TRT Project Director for review and approval prior to being placed in the individual allegation file. A properly completed document would bear the signatures of both the group leader and the TRT Project Director and, as necessary, that of the Director, Division of Licensing. This allegation should still be included in the allegation tracking system, with its status indicated as "closed".

6.4 Allegations that are judged to be of merit should be prioritized based on the need for their resolution at different licensing stages, i.e., prior to fuel load, 5% power, and full power operation. The following criteria should be considered in determining the priorities:

a. The allegations that should be resolved prior to fuel load authorization include those which (a) offer specific new information not previously available to the staff; (b) ~~which~~ appear to involve a discrepancy between design criteria, design, construction or operation of a safety-related component, system, or structure of such magnitude so as to raise a question regarding operability; (c) ~~or which~~ indicate a potential significant deficiency in the Applicants' management or quality assurance of safety-related activities.

b. The allegations ~~Those~~ that should be resolved prior to ~~exceeding~~ 5% power authorization include allegations which offer specific new information not previously available to the staff, and which may reasonably be expected to involve failures of safety-related systems or the ECCS systems.

c. The allegations that do not fall into either of the above two categories ~~criteria~~ should be resolved prior to full power operation. However, for allegations in this category, consideration should be given to having the Licensee address most of them, with the NRC staff auditing the Licensee's performance. These should be issues that either are very similar to those already reviewed in detail; or, based on the TRT's assessment, do not relate to significant safety matters; or which would not compromise the confidentiality of allege Under certain circumstances, some allegations in this category may be resolved over a longer time frame, even subsequent to full power operation.

7. CONFIDENTIALITY

7.1 All allegers, including those who have not specifically requested confidentiality, should generally be treated as confidential sources. Documents containing names or information that can be used to trace the identity of allegers must thus be treated as confidential. The general rule is that persons seeking access to documents containing or indicating the identity ~~identities~~ of allegers should have both a need and the right to do so. Any ~~attempted~~ exceptions to this (e.g., need to mention names in order to investigate specific allegations) must be presented in writing to the TRT Project Director for review. The TRT Project Director will coordinate with OELD to determine whether such request may be granted.

7.2 A confidentiality agreement should be executed for those allegers who specifically request it. This agreement should also be offered for execution to those allegers who by their actions convey the inference that their identity will be protected by the NRC but who are apparently unaware that such an agreement is available. (See Page 7 of Appendix A). A sample confidentiality agreement is attached at the end of Appendix A.

7.3 For allegers with a confidentiality agreement, the identity of the individuals must be protected. The names and other identifying information should not be referred to during discussions and should be purged from documents which are to be disseminated to TRT reviewers, etc. For those allegers without an executed confidentiality agreement, such rules should still apply in so far as practicable. This practice would prevent any confusions by the TRT reviewers who may otherwise release the allegers' identities inadvertently.

7.4 If a confidentiality agreement is executed during an in-person interview, it should be signed by the TRT Project Staff. A copy should be mailed to the alleger later and the individual should be so informed. A confidentiality agreement may also be executed subsequent to an interview, e.g., for telephone interviews, or when an alleger later decides to request such agreement. In this situation, a blank agreement should transmitted to the alleger for signature by mail or in person as convenience dictates.

This agreement, once signed and returned, will be signed by the TRT Project staff and a copy sent to the alleger. If an alleger should unilaterally add new conditions to or alter the existing conditions on the agreement, the TRT Project staff should consult the cognizant attorney of OELD prior to taking any further actions.

7.5 For allegers with an executed confidentiality agreement, the files containing their allegations, identities, etc. should be conspicuously labelled as such. On a case-by-case basis, the TRT reviewer/group leader should consult the TRT Project staff regarding proper storage/handling of these files.

7.6 If at any time for any reason an alleger's confidentiality is breached or jeopardized, the TRT reviewer/group leader must immediately inform the TRT Project staff who in turn will coordinate with the TRT Project Director and the OELD attorney to determine possible remedial measures to reduce the impact of disclosure. The Director, Division of Licensing should be informed by the TRT Project Director as appropriate.

7.7 When an allegation is closed-out based on written approval by the TRT Project Director, all documentation pertaining to this allegation (including the reviewer's personal notes) is subject to release under the FOIA. Until that time, all allegation documentation is exempt from release under the FOIA in accordance with 10 CFR 9.5 Exemption (7) due to actual, or the potential for, law enforcement action. However, appropriate precautions should be taken to protect confidentiality (e.g, purging names and identities from documents) before closing out an allegation since, once the case is closed, the complete file is "frozen" by the FOIA request should a subsequent FOIA request be received. (See Page A1-9, Appendix A)

REFERENCES

1. Diablo Canyon SER (NUREG-0675), Supplement No. 21, December 1983

2. Diablo Canyon SER (NUREG-0675), Supplement No. 22, March 1984

3. Diablo Canyon SER (NUREG-0675), Supplement No. 26, July 1984

4. Transcript for August 2, 1984 Commission meeting on discussion/possible vote on full power operating license for Diablo Canyon.

Document Name:
COMANCHE PEAK ACTION PLAN 2

Requestor's ID:
DEDIR01

Author's Name:
chet 10/29

Document Comments:

PROG PLAN
REDRAFT for
Noffsinger

RR70

COMMENTS ON COMANCHE PEAK RESPONSE TEAM ACTION PLAN

I. Electrical/Instrumentation Area

a.1. Heat Shrinkable Cable Insulation Sleeves

1. The sample size in accordance with MIL STD-105D should be stated. TUEC's action plan should state that the sample size was selected on the basis of a probability of success to achieve 95% confidence (95/95). Also, it should be indicated that the equipment to be sampled will be selected randomly.

2. The equipment selected in the sampling program should be identified and the selection should be based on that equipment of greater significance to safety.

3. The plan should specify the expanded sample size if normal inspection yields results that fail the 95% confidence level.

4. The lot or batch size of total number of installed units of equipment should be stated in the plan.

5. The acceptable quality level to achieve 95% confidence should be stated in the plan.

6. The plan should indicate that the root cause will be established for those units found defective in the sample selected.

7. When clarifying the construction installation procedures to identify the conditions which require actual installation of nuclear insulating sleeves, revision of procedure QI-QP-11.3-40 "Post Construction Inspection of Electrical Equipment and Raceways" should be considered to assure documentation of inspection of nuclear heat shrinkable insulating sleeves.

a.2. Inspection Reports on Butt Splices

1. The action plan does not identify the record retention system used to indicate how the additional inspection reports (which document the required butt splice witnessing) were obtained.

2. The action plan does not state the basis for selecting the additional sample of twelve cables.

3. Phase 2 of the action plan, irrespective of findings in Phase 1, which requires the idenification of all drawings on which butt splices occur, shall be implemented. Amendment 44 of the FSAR permits only limited amounts of butt splices to be used, and the NRC staff accepted the practice on this basis.

4. It should be noted, Phase 2 is also accomplished as part of action plant Item I.a.3, Seciton 4.A (third paragraph) and Section 4.B.

a.3. Butt Splice Qualification

1. Identify those cables and circuits in which butt splices exist in control panels.

2. Section 4.A (paragraph 3) should be coordinated with action plant Item I.a.2, Phase 2 in verifying butt splices in appropriate panels.

3. Section 4.B should be coordinated with action plan Item I.a.2, Phase 2 in verifying butt splices in bundles.

4. The action plan does not take into account completed butt splice installations which may be found not staggered due to the lack of provisions and requirements which were not included in the appropriate installation procedures.

a.4. Agreement Between Drawings and Field Terminations

1. The equipment selected in the sampling program shall be identified. The same comments as those for Item I.a.1 before related to the sampling program apply in this case.

2. The action plan does not define what is meant by circuit reliability requirements used as the criteria by TUEC engineering for specific acceptance/rejection criteria.

3. The NRC staff does not agree with TUEC's position of acceptable conditions based on operability. In this issue operability is not the concern, but conformance of hardware to the "as built" configuration drawings and documents.

4. Acceptable conditions, in the action plan, using cable/ conductor terminations of a size larger, should be supplemented to include the requirement for a good connection to be established.

5. The action plan shall identify all the latest design documents to the "as built" configuration drawings, to be used in the TUEC sampling program.

a.5. NCR's on Vendor Installed AMP Terminal Lugs

1. The action plan does not require the lug manufacturer to provide documented analyses to substantiate his change in position between the APC memo of September 2, 1981 (60° bend acceptable) and documented telephone record of April 17, 1984 (90° bend acceptable).

2. The action plan does not require the lug manufacturer or TUEC engineers to address the mechanical strength and electrical characteristics of the identified "twisted" conditions identified on the NCRs.

3. Other NCR's which identify terminal lugs bent or twisted in excess of 60°, which have been dispositioned as "It is our determination that these terminals do not pose an equipment serviceability problem and may be used as is" should also be included in the action plan.

b.1. Flexible Conduit to Flexible Conduit Separation

1. The analyses to be submitted to the NRC staff, in qualifying the flexible conduits as an acceptable barrier, shall include the acceptability of redundant flexible conduits in contact with each other.

2. The analyses, as required by the IEEE Std 384-1974 (Section 5.6.2)/Regulatory Guide 1.75, Revision 2, shall be based on tests performed to determine the flame retardant characteristics of the wiring, wiring materials, equipment, and other materials internal to the control panels.

b.2. Flexible Conduit to Cable Separation

1. The analyses to be submitted to the NRC staff, in qualifying the flexible conduit as an acceptable barrier, shall include redundant cable in contact with the flexible conduit barrier.

2. The analyses, as required by the IEEE Std 384-1974 (Section 5.6.2)/Regulatory Guide 1.75, Revision 2, shall be based on tests performed to determine the flame retardant characteristics of the wiring, wiring materials, equipment, and other materials internal to the control panels.

3. If the above analyses can demonstrate the flexible conduit as an acceptable barrier, the G&H/TUEC design criteria, errection specifications, drawings, QA/QC procedures, and other related documents shall be corrected accordingly and identified in the action plan.

b.4. Barrier Removal

1. If the root cause, is determined to have generic implication for the redundant field cables not meeting the six inch minimum separation requirement, the action plan shall prescribe the additional action.

d.1. QC Inspector Qualifications

d.2. Guidelines for Administration of QC Inspector Test

1. TUEC should be aware that items d.1 and d.2 may be impacted by the results of the overall programmatic review of QC inspection qualifications which will be presented under the QA/QC area.

II. Civil/Structural Area

b. Concrete Compression Strength

1. The action plan does not take into account the fact that more than one strength of concrete may have been placed between January 1976 and February 1977. Both 4,000 psi and 2,500 psi concrete grades were used on the project, If both are present in the tested concrete they must be analyzed separately.

2. The action plan contemplates conversion of rebound numbers to compression strength by use of the calibration curve supplied by the manufacturer. Since there is a high degree of uncertainty associated with the application of a general calibration curve to a particular set of materials, the statistical analysis should be carried out directly using the recorded rebound numbers.

3. Paragraph 4.(5) mentions comparison testing of concrete placed outside the time frame in question. To eliminate age effects this concrete should match the age of the concrete in question as closely as possible. Preferably concrete placed before the end of 1977 should be used.

4. The sampling plan stipulates that 50 placements from both the concrete in question and the concrete not in question will be tested. This number is adequate, but there is no mention of the number of tests to be run on each placement. The plan should state the number of test areas on each placement where concrete is in question and the number of test areas on each placement where it is not. As explained in Item 5, a sufficient number of tests on each placement where concrete is in question should be performed to substantiate the quality of each individual placement.

5. Because the allegation being investigated is that some individual tests were falsified, the strength results for the period in question should not be regarded as a single population. The mean values for individual placements should be compared with the mean of the concrete not in question at the 5% level of significance. The specific criteria to be used for judging the final acceptability of the overall test results should be delineated in the plan. Also identify remedial actions which would be followed if the test results fail to pass the acceptance criteria.

6. Submit QI-QP-2.5-7, "Determination of Strength of Concrete by Use of the Concrete Test Hammer" and QI-QP-13.0-5, "Verification of Concrete Test Hammer."

7. As noted in Section 5, the program for performing these tests should be submitted to the NRC staff prior to performing these tests.

8. Paragraph 4.(7) refers to a term "significant variation." Please define the term more specifically in the context of action plan II.b.

c. Maintenance of Air Gap Between Contrete Structures

1. Paragraph 4.(1) should indicated that QC inspections of the seismic gaps will be performed for all Category I structures.

2. Paragraph 4.(3) indicates that the original analyses were based on clear gaps, but that subsequently the design engineer evaluated the portions of the separation areas for the effects of the presence of rotofoam. Clarify what areas were evaluated and when these evaluations were performed. Submit these evaluations with the overall response to this issue.

3. Paragraph 4.(3) and the Decision Criteria should also indicate that changes in seismic response (e.g., effects of loads transferred between buildings and changes in seismic loads of structures) will be evaluated.

4. Describe more fully what is meant by the statement that "QC will document the debris characteristics on a 'best-effort' basis, using conservative estimations as needed."

5. Submit the revised procedure QI-QP-11.0-3, "Concrete or Mortar Placement Inspection."

d. Seismic Design of Control Room Ceiling Elements

1. Provide details of the new horizontal seismic restraints discussed in Paragraph 4.(a)(1) and explain what is going to replace the gypsum panels as discussed in Paragraph 4.(a)(2).

2. Describe the seismic analyses, including the details of the dynamic models that will be used to evaluate the ceiling structures.

3. It should be clearly demonstrated that the non-safety related conduit support system in the control room for conduit 2 inches or less is covered by the generic analyses discussed in Paragraph 4.(b) of Item I.c.

4. The Standards/Acceptance Criteria should be more explicit as to the analysis and design criteria that will be utilized in evaluating the ceiling structures (Item II.d) and the nonsafety-related conduit (Item I.c).

5. With respect to item 4.(c), a more detailed discussion of the general approach to be used for evaluating the seismic design adequacy of other Category II structures, systems and components elsewhere in the plant should t provided. The discussion should include the modeling methods, analysis approaches, key assumptions and basis thereof, as well as the computer codes to be utilized in the evaluation. Also explain why only the architectural features throughout the plant and not all non-seismic related items will be evaluated to determine the adequacy of the Damage Study program.

6. The results of the reviews described in Paragraphs 4(c)(1) and 4(c)(2) to address the adequacy of the treatment of Category II and non-seismic structures, systems and components elsewhere in the plant should be audited by an independent review team consisting of engineers not involved with the original evaluations. The details of these audits and findings should be submitted to the NRC for review. The TRT will then conduct an independent audit to confirm these findings.

III. Test Programs Area

a.1 Hot Functional Testing (HFT) Data Packages

1. In the background section it states that the technical review team (TRT) performed their review of the hot functional test data packages to ascertain the acceptability of the test results. This is not true. The TRT did not validate any test data; the team only reviewed the test procedures and resultant data to determine conformance with the CPSES FSAR, Chapter 14 commitments and NRC Regulatory Guide (RG) 1.68, "Initial Test Programs for Water-Cooled Nuclear Power Plants." Validation of test results is being performed, on a sampling basis, by NRC Region IV. The revision to the action plan should be clarified to reflect what was actually accomplished.

2. Regulatory Position 3, in Section C of RG 1.68 states that, to the extent practical, the plant conditions during the (preoperational) tests should simulate the actual operating and emergency conditions to which the structure, system, or component may be subjected. It also states that, to the extent practical, the duration of the tests should be sufficient to permit equipment to reach its normal equilibrium conditions (e.g., temperatures and pressures), and thus decrease the probability of failures, including "run-in" type failures, from occurring during plant operation. Explain the rationale for not meeting this regulatory position in the cases of 1CP-PT-02-12, "Bus Voltage and Load Survey," 1CP-PT-34-05, "Steam Generator Narrow Range Level Verification," and 1CP-PT-55-05, "Pressurizer Level Control."

3. The action specified by NRC in our letter dated September 18, 1984, is that all preoperational test packages should be reviewed to determine if there are other instances where test objectives or prerequisite conditions were not met. (The TRT intended that the TUEC pay particular attention to R.G.1.68, Regulatory Position 3 during this review.) TUEC's action plan (4.A.5.) states that the seven remaining HFT's will be reviewed for compliance with test objectives. The next action (4.A.6) implies that only if an unspecified number of test objectives were identified as not having been satisfied during that review would a statistical sampling in accordance with MIL-STD-105, Table X-G-2 be conducted for the other 136 preoperational tests. This is not acceptable to the NRC. The seven HFT's shall be added to the 136 remaining preoperational tests and the statistical sample done on that total. Also, TUEC shall provide the basis for the original sampl selected. In addition, RG 1.68 should be reviewed by the group who will conduct the review of the preoperational test packages to ensure that each member understands the concept which it advocates. TUEC shall provide the rationale for selection of the review group members.

a.3 Technical Specification for Deferred Tests

1. Since it is no longer intended to defer certain preoperational tests until after fuel loading and since a special test exception will be sought by TUEC from the NRC for snubber operability for thermal expansion testing after fuel load, the original issue as identified by TRT is no longer of concern. Revise the action plan to reflect this change.

a.4 Traceability of Test Equipment

1. The background section attributes the lack of traceability between the calibration of temperature measuring instruments and the monitored locations to personnel error. The TRT believes that the error was caused when the thermal expansion test procedure was revised to remove the instrument number from the data sheet. Startup Administrative Procedure (SAP)-7 recognizes that traceability is required and provides optional methods to ensure this traceability. However, when the thermal expansion test procedure was revised, an option was chosen which would not ensure the required traceability. Therefore, the TRT questions whether the person who revised the procedure and those who approved the revision adequately understood the need for traceability. The TUEC Action Plan should address this aspect. In addition, the action plan should include a commitment to review Unit 2 preoperational test procedures and Unit 1 and 2 initial start-up and plant operating procedures to ensure that similar errors do not exist and will not reoccur.

b. Conduct of Containment Integrated Leak Rate Testing (CILRT)

1. This is another example of where a preoperational test was conducted with the system in a configuration which did not simulate the actual plant operating and emergency conditions to the extent practical, as required by R.G.1.68, Regulatory Position 3. Consider the CILRT in the response to the comment III.a.1(2).

2. The background section states that due to an oversignt the CPSES FSAR was not amended to reflect deviations from 10 CFR, Appendix J and

ANSI N 45.4-1972 during the conduct of 1CP-PT-75-02. The action plan should be revised to explain how this oversight occurred and what the potential is for other similar oversights. Also address the TUEC procedure for documenting and processing deviations from FSAR commitments to ensure that they are included in future amendments to the document.

c. Prequisite Testing

1. While not specifically addressed by the TRT in its description of this issue, TUEC should be aware that other completed Prerequisite Test Instructions were found, i.e., other than XCP-EE-1 and XCP-EE-14, where craft personnel had signed for verification of prerequisites in lieu of System Test Engineers. Other prerequisite tests were not addressed by TUEC in response to this issue. The action plan should address all Prerequisite Test Instructions and include an assessment of the impact of any improper verification on subsequent testing.

d. Preoperational Testing

1. At the October 19, 1984 NRC meeting, TUEC stated that the records retrieval system at CPSES is complex. Since the background section for this item states that a large number of design documents are utilized by start-up, TUEC shall reassess the adequacy of the action plan for this item.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NOV 23 1984

MEMORANDUM FOR: Comanche Peak Technical Review Team
Group Leaders

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

SUBJECT: FINALIZING SSERs FOR PUBLICATION

We are committed to publishing our SSERs by the end of this calendar year. Since we must do this in phases we have established the following schedule for the SSER publications. Each group leader must try to have all of his technical input to R.C. Tang, so that we can coordinate with CRESS in having the SSERs typed final. The following deadlines have been established for completing the Comanche Peak Technical Review Team (TRT) SSERs for publication:

SSER 7 - Electrical/Instrumentation, Civil/Structural, Test Programs - to the printer on or by November 30, 1984.

SSER 8 - Mechanical/Piping, Miscellaneous - to be published on or by December 21, 1984.

SSER 9 - QA/QC, Coatings - to be published on or by December 21, 1984.

(I) The SSER sections for Civil/Structural and Test Programs are currently under review by TRT consultant C. Hofmayer. The SSER sections for Electrical/Instrumentation (final draft) have not yet been received for review by C. Hofmayer. Nevertheless, CRESS needs one week to type and reformat the SSER and to have all pages in camera-ready form for printing. Thus, the following deadlines are essential: (Individuals listed in parenthesis on left margin are principally responsible for items denoted.)

(C. Hofmayer, R.C. Tang)	°	C. Hofmayer comments on Test Programs SSER sections sent to group leader R. Keimig. (Comments on Civil/Structural SSER sections were provided to L. Shao on 11/14.)	11/19
(R. Keimig, L. Shao)	°	Test Programs and Civil/Structural SSER sections revised by group leaders.	11/21
(J. Calvo)	°	Electrical/Instrumentation SSER sections (final draft) ready for review by C. Hofmayer.	11/26

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(C. Hofmayer R.C. Tang)	°	Comments on Electrical/Instrumentation SSER sections received from C. Hofmayer and sent to group leader J. Calvo.	11/21
(J. Calvo)	°	Electrical/Instrumentation SSER sections revised by group leader	11/27
(C. Poslusny)	°	SSER sections for Civil/Structural Test Programs retyped and ready for editor and management (Noonan/Gagliardo) review.	11/26
(C. Haughney)	°	Allegation listings for Electrical/ Instrumentation, Civil/Structural, Test Programs ready for typing.	11/21
(C. Poslusny)	°	Management review of SSER sections on Electrical/Instrumentation, Civil/ Structural,Test Programs completed and SSER 7 ready for CRESS.	11/28
(C. Poslusny)	°	SSER 7 to printer	11/30

(II) The SSER sections on Mechanical/Piping and Miscellaneous are currently under review by TRT consultant B. Saffell. The sequence is as follows:

(L. Shao)	°	Executive summary for Mechanical/ Piping ready for review by B. Saffell.	11/23
(B. Saffell, R.C. Tang)	°	B. Saffell comments on Mechanical/Piping, Miscellaneous SSER sections to group leaders.	11/30
(L. Shao R. Bangart)	°	SSER sections on Mechanical/Piping, Miscellaneous revised by group leaders.	12/7
(C. Poslusny)	°	SSER sections on Mechanical/Piping and Miscellaneous retyped and ready for editor and management (Noonan/Gagliardo) review.	12/10

(B. Saffell)	°	Allegation listings for Mechanical/ Piping and Miscellaneous ready for typing.	12/10
(C. Poslusny)	°	Management review of SSER sections on Mechanical/Piping and Miscellaneous completed and SSER 8 ready for CRESS.	12/14
(C. Poslusny)	°	SSER 8, published	12/21
(III)			
(H. Livermore, C. McCracken)	°	Executive summaries and SSER sections on QA/QC and Coatings ready for consultant review.	11/26
(R.C. Tang) (ANL Consultant)	°	Comments on QA/QC and Coatings SSER sections received from consultant and sent to group leaders.	12/3
(H. Livermore, C. McCracken)	°	SSER sections on QA/QC and Coatings revised by group leaders.	12/7
(C. Poslusny)	°	SSER sections on QA/QC and Coatings retyped and ready for editor and management (Noonan/Gagliardo) review.	12/10
(C. Haughney)	°	Allegation listings for QA/QC and Coatings ready for typing.	12/10
(C. Poslusny)	°	Management review of SSER sections on QA/QC and Coatings completed and SSER 9 ready for CRESS.	12/14
(C. Poslusny)	°	SSER 9, published	12/21

All group leaders should note the following:

1. If any reviewed allegation is or appears to be related to other TRT subject areas, the group leaders are responsible for coordinating this as appropriate. A sentence or two addressing this should be added to the SSER section (possibly under Characterization of Allegations and/or the Findings section).

2. To the extent possible, close-out interviews with allegers have been conducted. It is the group leaders' responsibility to add a brief discussion of the interview and its outcome in the SSER sections (e.g., the findings were discussed with the alleger and he agreed; the alleger disagreed and the TRT did reinspection/reevaluation and still came to the previous findings; etc.) An appropriate place for adding this would be at the end of the Findings/Assessment section and before the Conclusions section.

Cooperation of group leaders is requested in meeting the above schedule. Input from group leaders should be sent to R.C. Tang by the most expeditious mode (e.g., by fax, express mail, hand-delivered).

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

cc: D. Eisenhut
J. Gagliardo
C. Hofmayer
C. Poslusny
B. Saffell
C. Haughney
D. Bounelis
R. Wessman
W. Oliu
A. Vietti
C. Brown
R.C. Tang