

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
DIVISION OF LICENSING
WASHINGTON, D. C. 20555

TECHNICAL REPORT TR-6410-1, BOOK 1

EXECUTIVE SUMMARY
TECHNICAL EVALUATION REPORT
ON
COMANCHE PEAK RESPONSE TEAM PROGRAM PLAN
AND
ISSUE-SPECIFIC ACTION PLANS, REVISION 2

JULY 29, 1985

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TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
2.0 STRUCTURE OF THE PLAN	1
3.0 PLAN OBJECTIVES	2
4.0 MAJOR CONCERNS	3
4.1 Criteria	3
4.2 Sampling	5
4.3 Corrective Action	5
4.4 External Source Issues	6
4.5 Discipline Specific Action Plans	6
4.5.1 Interfaces	7
4.5.2 Cable Trays and Supports	7
4.5.3 Civil/Structural	8
4.5.4 Piping and Supports	8
4.5.5 Construction QA/QC	9
5.0 RECOMMENDATIONS	10
5.1 Criteria	10
5.2 Sampling	11
5.3 Corrective Action	12
5.4 External Source Issues	12
5.5 Discipline Specific Action Plans	12
6.0 SUMMARY	13

1.0 INTRODUCTION

This Executive Summary presents the major concerns and recommendations resulting from a review by Teledyne Engineering Services of Revision 2 of the Comanche Peak Response Team Program Plan and Issue - Specific Action Plans (Plan). Detail comments and discussion on individual sections of the Plan can be found in Book 2. The intent of this review was to determine the adequacy of the Plan objectives to respond positively to issues related to Design and Construction adequacy raised by the NRC staff, CYGNA, ASLB and Intervenor (External Source Issues) as well as to determine whether the Plan details satisfy the stated objectives.

The TES review did not include any activities in the Plan associated with the following:

- (1) Electrical
- (2) Instrumentation and Control
- (3) Mechanical Systems

2.0 STRUCTURE OF THE PLAN

The Plan differentiates between outstanding issues generated by external sources and programs initiated by the Comanche Peak Response Team (CPRT) to provide confidence in the Design and Construction adequacy of Comanche Peak Steam Electric Station (CPSES).

A discipline (i.e., Mechanical, Piping and Supports, Electrical, Civil/Structural) approach is used for the self-initiated programs and the Plan is structured in that fashion. Each discipline is addressed in a Discipline Specific Action Plan (DSAP) which is generally a stand-alone document. Plan generic appendices are referred to in each DSAP but, with the exception of the Appendix on sampling, these are mostly format or interface documents.

The major disciplines addressed are as follows:

- Quality of Construction and QA/QC Program Plan
- Civil/Structural (includes major structures as well as cable trays and equipment supports)
- Piping and Supports
- Mechanical Components and Systems
- Electrical/I&C Systems and Components

The structure of the Plan in the self-initiated programs is such that discipline design adequacy is being reviewed on the one hand while construction adequacy is being reviewed on the other. This approach, if successfully completed, is structured to provide reasonable assurance that CPSES can be operated without undue risk to the public. The Plan recognizes that, in light of the number of issues raised by external sources, both design and installation must be reviewed to an unprecedented degree.

3.0 PLAN OBJECTIVES

Page 2 of 22 defines the general Plan objective as follows:

"CPRT is now charged with responding to and resolving the TRT and ASLB issues and remaining open SSER, CAT, SIT, RIV and IAP issues and with advising Texas Utilities management whether there is reasonable assurance that CPSES is designed and constructed so that it can be operated without undue risk to the public."

According to the Plan Introduction, this objective is reached by:

- (1) Addressing all outstanding issues raised by external sources, resolving them, determining their root cause and

generic implications and correcting any deficiencies associated with hardware or programs resulting from the generic implication determination.

- (2) Providing self-initiated reviews in the areas of Design, Construction and QA/QC adequacy. All deficiencies uncovered will be treated just as they are for external source issues.

4.0 MAJOR CONCERNS

The major concerns with the Plan resulting from this review are addressed in the following section. Although these concerns are major, resolution of them by CPRT would not result in excessive Plan revision.

4.1 Criteria

The criteria for determination of a deficiency is based on safety significance. Appendix E of the Plan defines safety significance as follows:

"The identified design (or construction) discrepancy, if uncorrected would result in the loss of capability of the affected system, structure or component to perform its intended safety function. Credit is not allowed for redundancy at the component, system, train or structure level."

A deficiency is the major mechanism used to increase sample size. Appendix A, Attachment 5, addresses Scope Expansion for the Design Adequacy Program (DAP) by stating that it may be necessary to expand scope to investigate trends, deviations or root causes. However, scope

expansion is a requirement where deficiencies (safety significant concern) exist, one or more deviations exist that would be deficiencies if occurring elsewhere or design activities are affected by identified root causes. A deviation results from failure to meet licensing commitment. Therefore even when a deviation initiates an increase in sample size it is because a safety significant concern (deficiency) is anticipated to result from the deviation not because the licensing commitments were not met. This approach requires judgement based on as yet to be established criteria of safety significance which is usually item dependent and not plant generic.

The concern is that compliance with the above does not assure compliance with the FSAR, Codes and NRC guidelines. Determination of acceptability to the NRC staff cannot be made until the evaluation of each specific component is completed and the criteria specified. This approach does not appear to be in compliance with the wording in the letter of transmittal accompanying the Plan. Mr. Council states on Page 2:

"It should be made unequivocally clear that we consider satisfaction of our FSAR commitments as the first guiding principle in execution of the CPRT program."

For example, in the Piping and Supports DSAP the Plan states that the purpose is to provide reasonable assurance that all safety significant piping and pipe support deficiencies have been identified and resolved. Attachment 2, which is the Stone and Webster reanalysis effort, does not define acceptance criteria for piping and supports. It does, however, refer to a procedure (CPPP-7) which contains the analysis approach and criteria for Class 2 and 3 piping systems. The NRC staff assumes that the acceptance criteria for Class 2/3 piping and Class 1/2/3 supports is specifically included in procedure CPPP-7 and complies with the current FSAR. The third-party review activity for piping is to ensure

consistency with the input and conformance to applicable Code and specification acceptance criteria. This is not a specific statement of compliance with current FSAR commitments. In the pipe support area, the third party review is to ensure that the functional and capacity requirements identified in the piping analysis are met. Again, not a commitment to the current FSAR.

4.2 Sampling

The general approach to sampling is acceptable with one major exception. This exception is directly tied to the criteria discussed in 4.1 above. The concern is related to increase of sample size resulting from a failure to meet criteria. In a sample size of 60, the Plan does not permit any failures to comply with criteria. This will result in a 95/5 confidence level. However, compliance with the current FSAR is not the criteria applied. The criteria for increasing sample size is a safety significant deficiency. It is necessary to go to Attachment 5 of Appendix A of the Plan to determine that deviations may trigger an increase in scope. Since a deviation is a failure to meeting licensing commitments then to a degree failure to meet licensing commitments can be tracked. However, the scope will only increase as a result of deviations if it can be determined that it would be a deficiency if occurring elsewhere. The method of making this determination is not defined in the Plan, is not generic and is highly system/location dependent.

4.3 Corrective Action

In the area of corrective action, the CPRT responsibility, as defined by the Plan, varies. For external source issues the Plan states that CPRT is responsible for defining corrective action. For generic implications and for deficiencies resulting from the self-initiated reviews the CPRT activity is completed when TUEC defines an acceptable

program to address the deficiency. The responsibility for defining corrective action should be uniform for all deficiencies.

4.4 External Source Issues

External source issues are identified as being covered in Issue Specific Action Plans (ISAP's) and DSAP's. However, all external source issues are not addressed individually and issues raised by external sources in an area covered by a DSAP in the Plan are not specifically catalogued. In the areas of piping and pipe supports none of the external issues are provided in the same detail as they would be if ISAP's were generated. There is a discussion of issues that must be resolved prior to beginning analysis, or those that must be resolved prior to completion of activities or those that are moot as a result of the reanalysis activity. The concern is that all external source issues will not be specifically addressed, evaluated and signed off. A major example is the external issue related to the adequacy of the Design Process. It is recognized that the Plan is structured to assure that any Design deficiencies are addressed and, if required, plant modifications made. This approach, if successful, could be utilized to address the Design Process concerns. However, lacking a specific issue addressing the Design Process and evaluating root cause or generic implications related to the issue could result in failure to expand samples appropriately. Successful completion of the piping reanalysis or the cable tray support work does not definitively address the Design Process issue.

4.5 Discipline Specific Action Plans

Major self-initiated reviews and overall response to some external source issues are covered by DSAP's. These are extensive programs and in some disciplines include significant reanalysis. The major concerns already discussed in the areas of criteria, sampling and corrective action would obviously impact the DSAP's. Following is a brief discussion of the major concerns associated with DSAP's.

4.5.1 Interfaces

There is a lack of defined interfaces between engineering disciplines. This is of particular concern in the area of building structures and other disciplines. Loadings applied to the building as a result of the reanalysis effort on piping must be documented, transmitted to the Civil/Structural discipline, evaluated and accepted. Conversely, loadings filtered through the building structure which effect equipment (cable trays, pumps, vessels, etc.) must be evaluated and transmitted to the appropriate discipline for use. Interfaces in the Design Process is an outstanding external source issue and therefore they need to be defined and controlled for all activities covered by the Plan.

Discipline interfaces are addressed in the Collective Evaluation Report, however these are prepared after the completion of DSAP and ISAP activities and may be too late in the process to effectively implement any required modifications to the Plan to accommodate information critical to one discipline that is generated by another.

4.5.2 Cable Trays and Supports

This DSAP does not address a major engineering activity in the area of cable tray supports being performed by Ebasco. The DSAP, as presented, defines a research type program which, on the surface, appears to be leading to acceptance of trays and supports based on overall functionality. The CPSES FSAR does define functionality as the governing criteria for trays but defines AISC as the governing criteria for cable tray supports. It is recognized that the purpose of the trays is to carry and protect cables to assure the functionality of the electrical system. This is assured by the use of AISC criteria for supports. The use of different criteria for supports which is based on electrical function would require a change to the licensing commitments

and would require discipline interfaces to assure acceptability. Since the Ebasco effort is not included in the Plan, specific comments on acceptability cannot be provided at this time.

4.5.3 Civil/Structural

There are two major concerns in this discipline which are really interdependent. The first is that the basis for selection of the major concrete and steel structures to be reviewed is not provided. A number of external source issues exist on supports which range from loading to structural attachment. Based on this, it may be appropriate to select a concrete structure that is heavily loaded by supports in concentrated areas. The shield wall might be an appropriate selection since it has a significant number of attachments. The containment liner is the largest steel structure in the plant and may be an appropriate selection as one of the structural engineering disciplines to be reviewed. Another item which may be appropriate to consider is embedded plates, particularly in light of the discussion under Interfaces above.

The second concern is related to the size of the sample in the areas of equipment mounting, HVAC supports, penetrations, etc. Since the overall process and control of interfaces has been raised as a concern it would seem appropriate to increase the size of the sample in these areas. For example, in the area of equipment mounting, the DSAP calls for the review of one mechanical item and one electrical item. This sample size is not sufficiently large enough to reach reasonable assurance that equipment mounting, in general, is appropriate.

4.5.4 Piping and Supports

The major area of concern with the reanalysis portion of this DSAP is that the details required for review are contained in procedures that are not included in the Plan. Since criteria for the

reanalysis effort is not specifically addressed it will be necessary to review these procedures in detail prior to determining adequacy of the approach. Further, concerns have been raised related to support/piping interdependence. These range from the ability to properly model the support in the piping analysis so that the piping response is representative, to the determination of representative loading in uniquely designed support structures. Since these issues are not representative of standard industry practice the DSAP (or the referenced procedures) should specifically address the techniques to be used in resolving them. It appears that the adequacy of supports to comply with licensing commitments will be demonstrated by reviewing existing analyses rather than performing a reanalysis. If this is true a more detailed description of the approach to be used, criteria to be applied and extent of the review is required.

In the area of small bore piping and supports a sampling approach will be utilized. Since this DSAP is being used to address a significant number of external source issues related to the piping and support design process and interfaces between disciplines (including installation), more detail should be provided on the techniques and attributes used in the sampling process.

4.5.5 Construction QA/QC

The Quality of Construction and Construction QA/QC Adequacy DSAP is based on the categorization of safety-related hardware constructed using similar work activities into homogeneous populations, the adequacy of which can be verified using similar reinspection techniques and/or documentation review activities. Our review of the Program Plan could not find the basic information to permit an independent evaluation of how the homogeneous hardware populations are established. The establishment of the hardware populations is the foundation of the self-initiated Quality of Construction and Construction QA/QC Adequacy

Program Plan and it is essential that the basis for formation of this foundation be clearly defined.

Additionally, the criteria for acceptability is based on the inspection of hardware using a list of attributes which are considered to be vital to assurance of safety significance. Since these attributes are not generic, vary for a given item, and must include design considerations, the DSAP should provide a basis for attribute determination.

5.0 RECOMMENDATIONS

The following major revisions to the Plan are recommended.

5.1 Criteria

The acceptance criteria should be the current licensing commitments. However, it is recognized that situations will arise where a component, system or item will not need to satisfy licensing commitments to demonstrate adequate margin as well as the ability to function or operate as required. In the normal process of Independent Design Verification of near term operating license nuclear plants, issues are raised which indicate noncompliance with licensing commitment in a specific area or for a system, item or structure. When such issues are found a number of alternatives are used to satisfy the reviewer and the NRC staff. Generally these can be categorized as follows:

- (1) modification to comply with licensing commitments,
- (2) more detail analysis to demonstrate compliance, or
- (3) a change to the licensing commitments to accommodate the issue is requested.

In most cases, the safety significance of the issue is a prime consideration.

At this point in the CPSES process, TUGCO should have an understanding, and the Plan should address, which areas:

- (1) will meet licensing commitments with a reasonable effort,
- (2) will not meet licensing commitments with a reasonable effort, or
- (3) acceptance criteria are not determinable at this time.

Where licensing commitments cannot be complied with, the proposed acceptance criteria should be defined and the applicant should begin to apply for modification to current commitments. The definition of acceptance criteria prior to Plan implementation is critical in order for the applicant to avoid performing extensive work which will not be acceptable to the NRC staff. For those areas for which criteria cannot be established at this time, the Plan should include tasks which are aimed at quickly providing the necessary input to make appropriate judgements and to assist in establishing criteria.

5.2 Sampling

The sampling process is directly linked to the acceptance criteria discussed above which is a major concern. Based on that, the sampling techniques cannot be judged acceptable until the criteria is resolved.

However, it is recommended that the information in Attachment 5 to Appendix A be provided in more detail and be included in the Introduction - Objectives of the Plan. All DSAP's and ISAP's should include the same wording or refer to Attachment 5 when discussing methods for determining scope increase.

The Plan needs to define the basis to be used in determining that a deviation would, or would not, be a deficiency if occurring elsewhere. This is critical since it is the only basis for increasing sample size as a function of a deviation.

5.3 Corrective Action

In order to provide consistency, CPRT should be responsible for defining corrective action for all deficiencies uncovered in implementing the Plan. Along with defining corrective action, CPRT is the most likely candidate for providing third-party review since they are familiar with the issue leading to the deficiency and have already specified the corrective action.

5.4 External Source Issues

In order to assure that all external source issues have been properly addressed by the Applicant, the Plan should include either:

- (1) an ISAP for each external source issue, or
- (2) a complete listing of all external source issues including source, reference activity in the Plan which addresses the issue, how it will be closed and a space for close out signature by a responsible member of the CPRT-SRT.

5.5 Discipline Specific Action Plans

The major concerns discussed in Section 4.0 should be addressed by the Applicant. More detail is required in each DSAP regarding:

- (1) acceptance criteria,
- (2) sampling attributes,
- (3) basis for scope and
- (4) discipline interface control

6.0 SUMMARY

The Plan contains the essential elements required to accomplish CPRT objectives. It is comprehensive in scope and provides a structure capable of addressing all external issues as well as a set of self-initiated programs intended to assure that CPSES is designed and constructed so that it can be operated without undue risk to the public.

A Plan of this nature and magnitude must be dynamic and subject to continuous revision in order to accommodate any deficiencies uncovered in the Plan process or to provide review in areas not currently addressed. The applicant has submitted such a Plan.

With modifications responsive to the concerns expressed in this report and with proper implementation by the Applicant, the Plan should resolve NRC staff concerns related to the design and construction adequacy at CPSES.

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TECHNICAL REPORT TR-6410-1, BOOK 2

TECHNICAL EVALUATION REPORT
DETAIL COMMENTS ON
COMANCHE PEAK RESPONSE TEAM PROGRAM PLAN
AND
ISSUE-SPECIFIC ACTION PLANS, REVISION 2

JULY 29, 1985

FOIA-86-657

B/3.

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TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
2.0 OBJECTIVES	1
3.0 REVIEW CRITERIA	2
4.0 SUMMARY	3
5.0 PRESENTATION OF COMMENTS	4
I. INTRODUCTION - OBJECTIVES	
APPENDIX A - DESIGN ADEQUACY PROGRAM PLAN	
APPENDIX B - QUALITY OF CONSTRUCTION AND QA/QC ADEQUACY PROGRAM PLAN	
APPENDIX C - ACTION PLANS	
1.c - ELECTRICAL CONDUIT SUPPORTS	
1.d.1 - QC INSPECTOR QUALIFICATIONS	
1.d.2 - GUIDELINES FOR ADMINISTRATION OF QC INSPECTOR TEST	
II.a - REINFORCING STEEL IN THE REACTOR CAVITY	
II.b - CONCRETE COMPRESSION STRENGTH	
II.c - MAINTENANCE OF AIR GAP BETWEEN CONCRETE STRUCTURES	
II.d - SEISMIC DESIGN OF CONTROL ROOM CEILING ELEMENTS	
II.e - REBAR IN THE FUEL HANDLING BUILDING	
III.a.1 - HOT FUNCTIONAL TESTING (HFT) DATA PACKAGES	

TABLE OF CONTENTS
(continued)

- III.a.2 - JTG APPROVAL OF TEST DATA
- III.a.3 - TECHNICAL SPECIFICATION FOR DEFERRED TESTS
- III.a.4 - TRACEABILITY OF TEST EQUIPMENT
- III.b - CONDUCT OF THE CILRT
- III.c - PREREQUISITE TESTING
- III.d - PREOPERATIONAL TESTING
- V.a - INSPECTION FOR CERTAIN TYPES OF SKEWED WELDS IN NF SUPPORTS
- V.b - IMPROPER SHORTENING OF ANCHOR BOLTS IN STEAM GENERATOR UPPER LATERAL SUPPORTS
- V.c - DESIGN CONSIDERATION FOR PIPING SYSTEMS BETWEEN SEISMIC CATEGORY I AND NON-SEISMIC CATEGORY I BUILDINGS
- V.d - PLUG WELDS
- V.e - INSTALLATION OF MAIN STEAM PIPES
- VI.a - GAP BETWEEN REACTOR PRESSURE VESSEL REFLECTIVE INSULATION AND THE BIOLOGICAL SHIELD WALL
- VI.b - POLAR CRANE SHIMMING
- VII.a.1 - MATERIAL TRACEABILITY
- VII.a.2 - NONCONFORMANCE AND CORRECTIVE ACTION SYSTEM
- VII.a.3 - DOCUMENT CONTROL
- VII.a.4 - AUDIT PROGRAM AND AUDITOR QUALIFICATION
- VII.a.5 - MANAGEMENT ASSESSMENT

TABLE OF CONTENTS
(concluded)

VII.a.6 - EXIT INTERVIEWS

VII.a.7 - HOUSEKEEPING AND SYSTEM CLEANLINESS

VII.a.8 - FUEL POOL LINER

VII.b.1 - ON-SITE FABRICATION

VII.b.2 - VALVE DISASSEMBLY

VII.b.3 - PIPE SUPPORT INSPECTIONS

VII.b.4 - HILTI ANCHOR BOLT INSTALLATION

VII.b.5 - ELECTRICAL CABLE TRAY RACEWAY SUPPORT
INSPECTIONS

VII.c - CONSTRUCTION REINSPECTION/DOCUMENTATION
REVIEW PLAN

VIII - CIVIL STRUCTURAL DISCIPLINE SPECIFIC
ACTION PLAN

IX - PIPING AND SUPPORTS DISCIPLINE SPECIFIC
ACTION PLAN

X - MECHANICAL SYSTEMS AND COMPONENTS DIS-
CIPLINE SPECIFIC ACTION PLAN

APPENDIX D - CPRT SAMPLING APPROACH, APPLICATIONS, AND GUIDE-
LINES

APPENDIX E - PROCEDURE FOR THE CLASSIFICATION, EVALUATION, AND
TRACKING OF SPECIFIC DESIGN ON CONSTRUCTION DIS-
CREPANCIES IDENTIFIED BY THE CPRT

APPENDIX F - CPRT INTERFACES

1.0 INTRODUCTION

In response to NRC concerns Texas Utilities Electric Company (TUEC) made a number of changes to the Comanche Peak Response Team (CPRT) Program Plan (Plan) and these changes are included in the current Revision 2. Teledyne Engineering Services (TES), under contract to the USNRC, has reviewed the Plan and prepared this Technical Evaluation Report. The report consists of two books:

- BOOK 1 - EXECUTIVE SUMMARY - TECHNICAL EVALUATION REPORT**
- BOOK 2 - TECHNICAL EVALUATION REPORT - DETAIL COMMENTS**

The major concerns and recommendations resulting from our review are presented here and in the Executive Summary. Detail comments which are concerned with Issue and Discipline Specific Action Plans and are generally related to the major concerns are included in Book 2 only.

The TES review did not include any activities in the Plan associated with the following:

- (1) Electrical
- (2) Instrumentation and Control
- (3) Mechanical Systems

2.0 OBJECTIVES

The objectives of the TES evaluation was to determine whether the Plan scope, structure and methodology will satisfactorily demonstrate that:

- (1) all the concerns related to design and construction adequacy identified by the NRC staff, CYGNA, ASLB, Intervenor and the Applicant have been satisfactorily addressed,

- (2) root cause and generic implications of concerns have been investigated and satisfactorily resolved and
- (3) there is reasonable assurance that the design and construction of Comanche Peak Steam Electric Station (CPSES) complies with the requirements embodied by the regulations and can be operated without undue risk to the public.

3.0 REVIEW CRITERIA

TES was guided by the following elements in performing the Plan review.

- (1) Scope must clearly indicate that the objectives set forth in 2.0 will be met.
- (2) All elements of the design process are addressed.
- (3) The evaluation of the significance of specific, generic and programmatic deficiencies is provided for.
- (4) The determination of root causes and evaluation of generic implications to determine their collective significance is provided for.
- (5) Corrective action techniques are specified appropriately.
- (6) Acceptability or exclusion of any system, structures, components or organizations from samples identified in the Plan is justified.

- (7) Categorizing and trending of existing and new concerns, determining impact of trends and establishing a program to resolve the implication of trends is provided for.
- (8) Qualification and training requirements for the personnel involved in conducting the various review and inspection activities is specified and appropriate.
- (9) The bases for the sampling methods is provided.
- (10) Documentation of program activities is provided.
- (11) Quality Assurance coverage of CPRT activities is appropriate.

To gain the necessary background information a number of documents were reviewed. The current FSAR was reviewed to determine licensing commitments for disciplines or components covered by Plan activity. Safety Evaluation Report Supplements 7, 8, 9, 10 and 11 were reviewed to gain an understanding of the NRC-TRT concerns. The Final Reports for Phases 1, 2 and 3 of the CYGNA Independent Assessment Program, correspondence related to CYGNA preliminary findings for Phase 4, a number of transcripts of public meetings and related summary dispositions were reviewed to determine the scope and magnitude of external source issues.

4.0 SUMMARY

The Plan contains the essential elements required to accomplish CPRT objectives. It is comprehensive in scope and provides a structure capable of addressing all external issues as well as a set of self-initiated programs intended to assure that CPSES is designed and constructed so that it can be operated without undue risk to the public.

With modifications responsive to the concerns expressed in this report and with proper implementation by the Applicant, the Plan should resolve NRC staff concerns related to the design and construction adequacy at CPSES.

5.0 PRESENTATION OF COMMENTS

The comments which follow are presented in a format which reflects the Plan Contents. Each section of the Plan is covered by a corresponding section in this report. For example, comments on Issue Specific Action Plan Appendix C, item I.b.4, "Barrier Removal" can be found in Appendix C, Item I.b.4 of this report.

Each section has an Introduction, (which summarizes the general description of the issue being addressed), Summary and Recommendations (which provides the conclusions reached on the adequacy of the section of the Plan being reviewed, including any major concerns) and Comments (which provides detail comments which are not usually of major implication).

I. Introduction - Objectives

TITLE INTRODUCTION OBJECTIVES

INTRODUCTION

The general objectives of the Plan are provided in this section as well as the CPRT Principles, Charter, Methodology, Process and Organization. The foundation on which the remainder of the Plan is built is presented herein and all other sections are essentially implementation of what is provided in the Introduction - Objectives.

SUMMARY AND RECOMMENDATIONS

This section of the Plan provides the bases for all of the activities to be performed by the CPRT and is the foundation on which all of the Issue Specific Action Plans (ISAP's) and Discipline Specific Action Plans (DSAP) are built. Until the major concerns discussed below are addressed adequately this portion of the Plan will not satisfy NRC concerns.

Acceptance Criteria

The criteria for determination of a deficiency is based on safety significance. Appendix E of the Plan defines safety significance as follows:

"The identified design (or construction) discrepancy, if uncorrected would result in the loss of capability of the affected system, structure or component to perform its intended safety function. Credit is not allowed for redundancy at the component, system, train or structure level."

A deficiency is the major mechanism used to increase sample size. Appendix A, Attachment 5, addresses Scope Expansion for the Design Adequacy Program (DAP) by stating that it may be necessary to expand the scope to investigate trends, deviations or root causes. However, scope expansion is a requirement where deficiencies (safety significant concern) exist, one or more deviations exist that would be deficiencies if occurring elsewhere or design activities are affected by identified root causes. A deviation results from failure to meet licensing commitment. Therefore even when a deviation initiates an increase in sample size it is because a safety significant concern (deficiency) is anticipated to result from the deviation not because the licensing commitments were not met. This approach requires judgement based on an as yet to be

I. Introduction - Objectives
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established criteria of safety significance which is usually item dependent and not plant generic.

The concern is that compliance with the above does not assure compliance with the FSAR, Codes and NRC guidelines. Determination of acceptability to the NRC staff cannot be made until the evaluation of each specific component is completed and the criteria specified. This approach does not appear to be in compliance with the wording in the letter of transmittal accompanying the Plan. Mr. Council states on Page 2:

"It should be made unequivocally clear that we consider satisfaction of our FSAR commitments as the first guiding principle in execution of the CPRT program."

For example, in the Piping and Supports DSAP the Plan states that the purpose is to provide reasonable assurance that all safety significant piping and pipe support deficiencies have been identified and resolved. Attachment 2, which is the Stone and Webster reanalysis effort, does not define acceptance criteria for piping and supports. It does, however, refer to a procedure (CPPP-7) which contains the analysis approach and criteria for Class 2 and 3 piping systems. The NRC staff assumes that the acceptance criteria for Class 2/3 piping and Class 1/2/3 supports is specifically included in procedure CPPP-7 and complies with the current FSAR. The third-party review activity for piping is to ensure consistency with the input and conformance to applicable Code and specification acceptance criteria. This is not a specific statement of compliance with current FSAR commitments. In the pipe support area, the third party review is to ensure that the functional and capacity requirements identified in the piping analysis are met. Again, not a commitment to the current FSAR.

The acceptance criteria should be the current licensing commitments. However, it is recognized that situations will arise where a component, system or item will not need to satisfy licensing commitments to demonstrate adequate margin as well as the ability to function or operate as required. In the normal process of Independent Design Verification of near term operating license nuclear plants, issues are raised which indicate noncompliance with licensing commitment in a specific area or for a system, item or structure. When such issues are found, a number of alternatives are used to satisfy the reviewer and the NRC staff. Generally these can be categorized as follows:

I. Introduction - Objectives
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- (1) modification to comply with licensing commitments,
- (2) more detail analysis to demonstrate compliance, or
- (3) a change to the licensing commitments to accommodate the issue is requested.

In most cases, the safety significance of the issue is a prime consideration.

At this point in the CPSES process, TUGCO should have an understanding, and the Plan should address, which areas:

- (1) will meet licensing commitments with a reasonable effort,
- (2) will not meet licensing commitments with a reasonable effort, or
- (3) acceptance criteria are not determinable at this time.

Where licensing commitments cannot be complied with, the proposed acceptance criteria should be defined and the applicant should begin to apply for modification to current commitments. The definition of acceptance criteria prior to Plan implementation is critical in order for the applicant to avoid performing extensive work which will not be acceptable to the NRC staff. For those areas for which criteria cannot be established at this time, the Plan should include tasks which are aimed at quickly providing the necessary input to make appropriate judgements and to assist in establishing criteria.

Corrective Action

Corrective action by the CPRT is provided on Page 2 for the resolution of external source issues only. Corrective action is not provided by the CPRT for root cause effects or generic implications of external source issues nor is it provided for any deficiencies uncovered in the self-initiated program. Page 8 indicates the CPRT is responsible for specifying corrective action yet it does not appear on the list of items covered by the CPRT Program Plan (Page 3). The responsibility for providing corrective action should be uniform throughout the Plan. Ideally the CPRT should provide corrective action to TUEC in the form of a number of acceptable alternatives. This would allow TUEC to select the most appropriate solution for their current situation. In order to provide consistency, CPRT should be responsible for defining corrective action for all deficiencies uncovered in implementing the Plan. Along with defining corrective action, CPRT is the most likely candidate for providing third-party review since they are familiar with the

Discipline-Specific Action Plan
Item No. VIII Rev. 0
(continued)

For testing, will "National Standards" be utilized and to what degree (i.e., ASTM E-488)?

Will plant procedures be used during the construction phase to simulate plant conditions?

Will results of testing only be used for third-party verification of adequacy of design or will test results be used by the project for determination and use of developing design criteria?

- Page 2, Section 4.1.1, 4th paragraph, last sentence

Will the use of load washers be adequate in determining the actual load in the anchor bolts under plant operating conditions?

- Page 4, Section 4.1.3, System Testing

These tests will result in damping values for each mode. Depending on the degree of nonlinearity of the actual system(s), results may not be extrapolated to other systems and frequencies. How will this be accounted for in the tests?

TITLE TASK VIII.e: CABLE TRAY/CONDUIT SUPPORTS - COMPONENT AND SYSTEM BEHAVIOR AND MODELING

COMMENTS

No comments.

TITLE TASK VIII.f: CABLE TRAY/CONDUIT SUPPORTS - SYSTEM ANALYSIS

COMMENTS

- Page 1, Sections 1.0 and 3.0

Reference is made to "Task VIII.d, Component and System Behavior and Modeling." This should be Task VIII.e.

I. Introduction - Objectives (continued)

issue leading to the deficiency and have already specified the corrective action.

Exclusions

The plan specifically excludes work performed by Westinghouse, the NSSS Vendor. Justification for excluding Westinghouse, or any other vendor, should be provided in the Plan. In addition, interfaces between excluded vendors and other TUGCO subcontractors should be a part of the Plan and subject to review by the CPRT.

Personnel Training

Training of personnel involved in CPRT activity should be documented and personnel training records controlled and subject to audit. In addition, training programs utilized by the CPRT should be controlled and subject to review.

Quality Assurance

It is recognized that an umbrella QA program for all CPRT activities is being developed. This is important to proper implementation of the Plan. However, within the framework of the CPRT activities there are some areas that require further definition or strengthening.

- (1) Access to record documentation, calculations, files, etc., by CPRT personnel should be subjected to document control requirements to assure use of proper revisions.
- (2) Analyses and calculations should be included in the CPRT project files and subject to audit. This is important when a corrective action or categorization of a deviation as non-safety significant is based, in part, on analyses and calculations.
- (3) Inspection activity performed by and for the CPRT should be performed by certified personnel where certification is a licensing commitment. Current QC Inspector qualifications and certification are the subject of ISAP I.d.1 and, to a degree, I.d.2 and VII.C. Based on this, the use of existing QC Inspectors to perform CPRT inspections should be limited to those determined acceptable at the conclusion of the ISAP activities addressing QC Inspectors.
- (4) The sampling basis for a third-party overview of record reviews and evaluations must be defined.

I. Introduction - Objectives
(continued)

- (5) The third-party should review all CPRT activities performed by the appropriate CPSES project organization.

External Source Issues

In situations where external source issues are covered in DSAP's, including complete reanalysis in a given design area, the issues which will be closed or made moot by successful completion of the DSAP should be listed and a final sign-off provided by a responsible CPRT-SRT individual.

Review Team Leaders

The responsibilities of the Review Team Leaders are substantial and their is concern that they will not be able to perform their activities to the level required by the Plan. The importance of the Review Team Leader is exemplified by the fact that determination of root cause, safety significance and generic implications and defining corrective action is their responsibility. These activities are critical to the successful completion of the Plan as well as its generic applicability to essentially all of CPSES design and construction. In addition to these highly technical activities the Review Team Leader also has a great number of administrative and personnel management responsibilities. It is recommended that coordinators be provided to handle administrative and personnel tasks to free the Review Team Leader to deal with only technical activities.

Comments

- Page 1 of 22, Item II

Details of how CPRT actions address Unit 2 cannot be found in the plan.

- Page 5 of 22, Items II and III

There appears to be a conflict between the last two paragraphs of Item II and specification of corrective actions in Item III.

- Page 5 of 22, Item III

The plan does not define or address findings.

Thorough reviews should be documented.

I. Introduction - Objectives
(continued)

- **Page 6 of 22, Item III.A**

The Plan does not define the approach to be used in evaluating each external source issue for which a preliminary assessment indicates no safety significance exists.

- **Page 6 of 22, Item III.C**

The wording of Attachment 5 of Appendix A should be included here. Particularly that part related to deviations.

Trending of deviations should be covered here as well as in generic implications evaluation.

- **Page 7 of 22, Item III.E**

Will the Collective Significant Evaluation address the determination as to whether the existence of multiple deviations indicates a shortcoming in programs and procedures?

- **Page 9 of 22, Item III.I**

All the ISAP's and DSAP's do not explicitly define the sampling method and bases for using sampling as stated here.

- **Page 9 of 22, Item III.J**

Records and Files should also include copies of NCR's, corrective actions and training programs.

- **Page 12 of 22, Item III.K**

It is noted that the NCR and corrective action systems are an issue under review by the CPRT in ISAP VII.a.2. This could impact Paragraph 4 on this page concerning implementation and CPRT overview, particularly until that ISAP is resolved satisfactorily.

- **Page 13 of 22, Item IV.A**

When a DAP proceeds directly to a hardware modification the issues which led to that decision must still be evaluated to assure that program or procedural deficiencies do not exist.

**I. Introduction - Objectives
(concluded)**

- **Page 14 of 22, Item IV.B**

The word essentially should be removed.

- **Page 17 of 22, Item VIII.A**

Interface with CPSES project personnel is through CPRT-SRT as shown in Attachment 2.1.

- **Page 19 of 22, Item VIII.B.1**

Does it create a conflict when Mr. Guibert, a member of SRT which is responsible for reviewing and approving collective significance evaluation reports, is responsible for the development of those reports?

- **Attachment 3**

The following general comments are made after comparing individual ISAP's to the format presented in this attachment. It is noted that the comments are concerned with the ISAP's and not the format which is considered to be an effective one.

- Procedures to be used are not identified.
- Personnel training is not discussed.
- Confidence level definitions are not consistent.
- Sampling plans and bases are not always defined or consistent.
- Acceptance standards criteria are not consistent.
- Decision criteria not consistent, available in some plans, is marked N/A in others and in general does not describe the criteria for closing out the item.

APPENDIX A
Rev. 0

TITLE DESIGN ADEQUACY PROGRAM PLAN

INTRODUCTION

This Appendix provides the methodology for execution of Discipline Specific Action Plans (DSAP's) which are the basis for implementation of a major portion of the Plan. DSAP's provided in the Plan should agree with the methodology of this Appendix.

SUMMARY AND RECOMMENDATIONS

In general, DSAP's which follow the methodology of this Appendix would be appropriate. However, until the following recommendations and comments are addressed by CPRT this Appendix will not satisfy NRC concerns.

The use of safety significance as a criteria for all issues is unacceptable (see discussion on Criteria under I. Introduction - Objectives).

Corrective action responsibility should be uniform throughout the DAP (see discussion on Corrective Action under I. Introduction - Objectives).

Although IDVP's and IDI's conducted at other nuclear facilities provide some input, the situation at CPSES has been sufficiently reviewed and discussed to indicate the breadth and depth required that, when aggregated with previous reviews, all of the significant design areas and disciplines will have been covered. The review should be based on the specific concerns at CPSES and the breadth and depth, when combined with the ISAP's and other DSAP's, provides reasonable assurance that the design is acceptable.

Comments

- Page 4 of 58

Balance of plant (BOP) is a common term issued in nuclear power plant design and usually refers to the non-NSSS components and systems. However, it is our understanding that at CPSES, BOP was used by construction to denote non-ASME Code activities. This potential conflict in terminology should be reviewed.

APPENDIX A
Rev. 0
(continued)

- **Page 12 of 58**

Special studies should be performed under Design QA procedures. (See discussion on Quality Assurance under I. Introduction - Objectives discussion.)

- **Page 13 of 58, Item 4**

No mention is made of supports other than non-Westinghouse designed supports on ASME Class 1 systems. The Plan is specific in other areas that supports are included in this reanalysis effort and this can be considered an editorial comment.

What is the function of the Gibbs & Hill review? It is assumed that this review is necessary in order to maintain G&H as designer of record. How are deviations or deficiencies uncovered by G&H handled? What interfaces exist between G&H and S&W and G&H and CPRT?

- **Page 15 of 58, Item D**

Interfaces between engineering disciplines should also be addressed here.

- **Attachment 1**

Check if Supplier Documentation is identified as a Plan activity during evaluation of Design QA/QC. This activity is not specifically addressed in the Attachment 4 matrices.

- **Attachment 3**

This attachment should list all external source issues. The originator should be identified and the specific ISAP or DSAP which addresses the issue referenced. It may be appropriate at this time to identify Walsh-Doyle allegations separate from ASLB issues.

- **Attachment 4**

Multidiscipline considerations should also include interfaces between Civil/Structural and Mechanical, Piping, Supports and Electrical disciplines.

APPENDIX A
Rev. 0
(concluded)

Design output review is not indicated for a number of activities for which it should be a requirement (i.e., high energy line break, support system, seismic qualification, etc.)

- **Attachment 5**

3.0 Scope Development

See comments under Summary and Recommendations for this Appendix.

- **4.0 Scope Expansion**

The scope is expanded for deviation only when the deviation would be a deficiency if occurring elsewhere. This approach requires judgement based on as yet to be established criteria and safety significance which is usually item dependent and includes design attributes (loading, function, etc.) as well as construction attributes (weld quality, anchorage, etc.).

**APPENDIX B
Rev. 2**

TITLE QUALITY OF CONSTRUCTION AND QA/QC ADEQUACY PROGRAM PLAN

INTRODUCTION

This plan has been formulated by the CPRT to evaluate and resolve a number of concerns regarding the Quality of Construction and the adequacy of the QA/QC Program.

CPRT has been charged with responding to and resolving the TRT and ASLB issues and remaining open SSER, CAT, SIT, RIV and IAP issues (collectively, these concerns are sometimes referred to herein as the "External Source issues").

SUMMARY AND RECOMMENDATIONS

The implementation of this plan will not satisfy the NRC's concern regarding Quality of Construction and QA/QC Program adequacy. It is not obvious that safety significant attributes can be determined for a population. Such attributes may be item, location or function specific. This Appendix must provide the attributes which define a population.

COMMENTS

- **Page 3, second paragraph**

Delete word "fully".

- **Page 3, third paragraph**

The statement beginning with the word regardless is:

Provocative and may be interpreted by some as indicative of a lack of the sincerity of management in its commitment to resolve the issues.

Suggest reword to state -"including the extent".

- **Page 4, Section II A, second bullet**

Add item number of action plan VII.c and correct the title to read Construction Reinspection/. . .

**APPENDIX B
Rev. 2
(concluded)**

- **Page 4, Section A 1**
Typo error - Should read "as CPRT determines it . . ."
- **Page 5, first paragraph**
Suggest after word criteria, insert - "using prepared checklists".
- **Page 5, last paragraph**
This paragraph should identify its interaction with ISAP VII.a.2.
Suggest that where the word "Program" is used, the appropriate words are "Corrective Action".
- **Page 6, last paragraph, first sentence**
Identify ISAP VII.c or make reference to Attachment 1.
- **Page 7, first paragraph, last line**
Add which are addressed in ISAP VII.a.6.

Note: This section of Appendix B addresses the Category 2 ISAP. The Category 2 ISAP VII.c does not address the potential occurrence of harassment or intimidation of QC Inspectors.
- **Page 8, first paragraph**
Add to end of first sentence - "using prepared checklists".
- **Page 9, first paragraph**
The last sentence is provocative and may be interpreted by some as meaning "we'll do it if we have time and it doesn't cost".

APPENDIX C
ACTION PLANS

**Issue-Specific Action Plan
Item No. I.c Rev. 2**

TITLE ELECTRICAL CONDUIT SUPPORTS

INTRODUCTION

This ISAP addresses the adequacy of nonsafety-related conduit support installations in seismic Category I areas of the plant. They should be designed in such a way that their failure would not adversely affect the function of safety-related components or cause injury to plant personnel.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concerns regarding this specific issue provided the following comments are incorporated.

COMMENTS

- **Page 5, Section 4.1.2.1, 4th paragraph**

The engineering sample should be selected so that all runs meet criterion 1. This would be consistent with the definition of a reject defined in Section 4.1.2.5.

- **Page 7, Section 4.1.2.3, 3rd paragraph**

It states that "each support will be considered independently in the vertical and transverse directions." The conduit clamps, however, may restrain the conduit in three directions as stated in DSAP VIII, Table VIII-3, Item 11. Results from the resolution of this item should be incorporated in this ISAP.

- **Page 7, Section 4.1.2.3, 4th paragraph**

Reference is made to performance requirements. These requirements should be identified and checked to see if they comply with the FSAR commitment.

- **Page 8, Section 4.1.2.4**

It is assumed that the definition of "conduit runs" includes the conduit and associated supports.

Issue-Specific Action Plan
Item No. I.c Rev. 2
(concluded)

- Page 8, Section 4.1.2.5

Only mentions looking at the rejects if the number of rejections is greater than two. No mention is made of looking at root cause or generic implication of these two rejects. Why?

**Issue-Specific Action Plan
Item No. I.d.1 Rev. 1**

TITLE QC INSPECTOR QUALIFICATIONS

INTRODUCTION

This ISAP addresses the Training Qualification Certification and Recertification for all Electrical QA Inspectors, all current ASME Inspectors and current Non-ASME Inspectors.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will not satisfy the NRC's concern regarding the training, qualification and certification of QA Inspectors. Although this plan addressed Electrical Inspectors, and current ASME and Non-ASME Inspectors, the NRC's concern regarding deficiencies in the QA Inspector Training Qualification and Certification Program was not limited to current personnel.

The plan Section 4.0, Page 7, first paragraph states that "Inspectors whose qualifications are found to be acceptable, will be dispositioned and documented without further action. Since the TRT found examples of deficient inspections performed by Qualified Inspectors, it is recommended that a sampling of the previous work of Qualified Inspectors should be included in this action plan.

COMMENTS

- Section 4.0, Page 9, 1st and 2nd paragraph

The reviewer does not understand the meaning of objective type and subjective type attributes.

- Will the attributes checklist differentiate between objective and subjective?

**Issue-Specific Action Plan
Item No. I.d.2 Rev. 1**

TITLE GUIDELINES FOR ADMINISTRATION OF QA INSPECTOR TEST

INTRODUCTION

This action plan primarily addresses the Training and Certification Program for Electrical Inspectors. In light of potential generic implication for other QC Inspector Training and Certification, this plan addresses all CPSES Inspectors.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue, provided that the following comments and recommendations are incorporated and that additional items identified in SSER II, Section 4.3, Page P-28 are added to Section 4.1.1, Page 3, items to be considered during Special Evaluation Team (SET) review of the procedures:

- Methods to assure that the examinee is not retested using an identical test after failing the first one.
- Methods to control the time limit or number of times a test can be retaken.
- Methods to control the time limit between a failed test and a retest.
- Methods to control the disqualification of a test question.
- Methods to control the consistency of scoring the original test and the retest.
- Methods to define how the administration of tests should be monitored.

It is recommended that the review of the exams currently in use should be included in the SET review performed in Section 4.1.1. The development of the exams result from implementation of the procedure.

COMMENTS

- Section 4.1.1, Page 2, 2nd paragraph
The title of manual 2323-S-0190 should be added.

Issue-Specific Action Plan
Item No. II.a Rev. 2

TITLE REINFORCING STEEL IN THE REACTOR CAVITY

INTRODUCTION

This ISAP deals with the civil/structural allegation of reinforcing steel which was omitted in the reactor cavity. SER 8 and the program plan were reviewed to determine if the ISAP would properly address the issue presented.

SUMMARY AND RECOMMENDATIONS

This ISAP as defined will satisfy the NRC's concern regarding the omission of rebar provided that the rebar was added (on Revision 3 of the drawing) for shrinkage control. Any engineering evaluations conducted to justify the as-built design should be done with the loads and criteria in effect at the time of the original analysis/design.

COMMENTS

- Page 7, Logic Diagram

The term "acceptable" in the logic diagram on the last page of the ISAP should be better defined.

If an item is unacceptable, the logic diagram indicates a path to scope broadening, and on to the final report. This appears to be a short circuit in the diagram.

Issue-Specific Action Plan
Item No. II.b Rev. 2

TITLE CONCRETE COMPRESSION STRENGTH

INTRODUCTION

This ISAP deals with the civil/structural allegation of possible falsification of concrete strength tests. The program plan and SER 8 were reviewed to determine if the ISAP would properly address the issue presented.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding the quality of the concrete in question. This ISAP addresses the design adequacy of the concrete in question; however, the issue of the falsification of construction quality control tests is not addressed. If falsification will be addressed in another ISAP, it should be so stated.

COMMENTS

No comments.

Issue-Specific Action Plan
Item No. II.c Rev. 2

TITLE MAINTENANCE OF AIR GAP BETWEEN CONCRETE STRUCTURES

INTRODUCTION

This ISAP deals with the allegation of rotofoam or debris remaining in the separation gap between buildings. The FSAR, SER 8 and the program plan were reviewed to determine if the ISAP would properly address the issue presented. The ISAP calls for 100% inspection of all joints in question. If either rotofoam or debris is found in the joints, it will be removed, or an evaluation will be made to determine acceptability of the as-built condition. Based on this evaluation, the debris will either be removed or the as-built condition will be approved.

SUMMARY AND RECOMMENDATIONS

The Action Plan as defined will satisfy the NRC's concern regarding the structural significance of this issue. This ISAP, however, does not address the QA/QC issue concerning the original QC inspection and the disposition of the NCR written about this condition.

COMMENTS

None.

Issue-Specific Action Plan
Item No. II.d Rev. 2

TITLE SEISMIC DESIGN OF CONTROL ROOM CEILING ELEMENTS

INTRODUCTION

This ISAP deals with the civil/structural allegation that the field-run conduit, drywall, and lighting installed above the control room were classified nonseismic and were thus inadequately supported.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue. The approach used in this ISAP is 100% evaluation and removal of all drywall in the ceiling.

COMMENTS

None.

**Issue-Specific Action Plan
Item No. II.e Rev. 2**

TITLE REBAR IN THE FUEL HANDLING BUILDING

INTRODUCTION

This ISAP deals with the civil/structural allegation of unauthorized cutting of rebar in the fuel handling building. SER 8 and the program plan were reviewed to determine if the ISAP would properly address the issue presented.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will not satisfy the NRC's concern regarding this specific issue. The approach used to determine the rebar location is approximate; therefore, conclusions would be difficult to defend.

The rebar should be mapped on the floor using a more positive means such as ultrasound. Since rebar has a tendency to move during a pour, rebar cannot be accurately located by the rebar drawings.

Other areas of concern with respect to rebar cutting will be determined by comparing the Hilti-bolt length to the clear-cover dimension of the concrete. Clear cover is usually a small dimension compared to Hilti-bolt embedments; therefore, the population will be significant. No provision is made for sampling. Any concrete excavation using core drills should be reviewed for rebar cutting in addition to Hilti applications.

COMMENTS

- **Page 3, 2nd paragraph**

This ISAP does not present the method which will be used to determine cut rebar if the embedment depth is found to be greater than the clear cover.

- **Page 7, Logic Diagram**

In the logic diagram, the confirmation of rebar cutting should come before the analysis of the as-built condition.

Issue-Specific Action Plan
Item No. III.a.1 Rev. 3

TITLE HOT FUNCTIONAL TESTING (HFT) DATA PACKAGES

INTRODUCTION

This ISAP provides for the CPRT review of the Hot Functional Test Data Packages and Pre-Operational Test Data Packages to assure that FSAR commitments are satisfied.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will not satisfy the NRC's concern regarding Hot Functional and Pre-Operational Test Data Packages. The NRC requested that TUEC review all complete Pre-Operational Test Data Packages and this plan only addresses sampling of those packages.

COMMENTS

- Page 5, last paragraph and Page 8, Section 4.1.8
These appear to be in conflict with Section 2.0.
- Page 7, Section 4.0
Does not contain a narrative description of the scope of this plan. It appears that the actual scope of this plan is given in Section 3.0 background.
- Page 7, first paragraph
The subject "Approval Levels" is not addressed in Section 4.0.
- Page 12, Section 4.6
Refers to Attachment 1 criterion...
Attachment 1 is titled "Guidelines".
Safety significance should be addressed in this plan.

Issue-Specific Action Plan
Item No. III.a.1 Rev. 3

COMMENTS (CONTINUED)

- Page 6, third paragraph, sentence beginning: Retest for these cases are specified...

The reviewer understands this sentence to mean: Bench test of a component will provide system pre-operational test acceptance although the system is not retested (Pre-operational) after the component is installed. The reviewer does not agree with this action because e.g., the component could be installed in reverse orientation.

Issue-Specific Action Plan
Item No. III.a.2 Rev. 2

TITLE JTG APPROVAL OF TEST DATA

INTRODUCTION

This ISAP deals with the TRT observation that the Hot Functional Test (HFT) data had not been approved until cooldown, and that TUEC is not currently committed to having a Joint Test Group (JTG) for reviewing and approving the HFT data.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding the approval of HFT test data. The ISAP is complete including the amendment to the FSAR, and concludes that there are no generic implications associated with this issue.

COMMENTS

None

Issue-Specific Action Plan
Item No. III.a.3 Rev. 2

TITLE TECHNICAL SPECIFICATION FOR DEFERRED TESTS

INTRODUCTION

This ISAP deals with the Technical Specification problems associated with deferring of some pre-operational tests to after fuel load.

SUMMARY AND RECOMMENDATIONS

Subsequent to the request for deferring the tests to after fuel load, the decision was made to do the tests prior to fuel load making the issue moot. The Action Plan is, therefore, complete.

COMMENTS

None

**Issue-Specific Action Plan
Item No. III.a.4 Rev. 3**

TITLE TRACEABILITY OF TEST EQUIPMENT

INTRODUCTION

This plan evaluates a deficiency identified by the TRT and provides for determination of root cause and generic implications and correction of the deficiency. The deficiency was cited as: data for the thermal expansion tests did not provide for traceability between the measuring instruments and the monitored locations as required by startup administrative procedure SA-7. The information was separately available in a personal log held by engineering.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue.

The action under this plan is essentially complete pending the issue of the results report to the SRT.

COMMENT

- Section 3.2, Page 2, states: "The root cause of this error . . ." Is "Error" the appropriate designation or classification?

**Issue-Specific Action Plan
Item No. III.b Rev. 3**

TITLE CONDUCT OF THE CILRT

INTRODUCTION

This ISAP deals with the conducting of the CILRT with three electrical penetrations isolated, and the use of an alternate calculation method to the method prescribed in the FSAR.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concerns when implemented.

COMMENTS

None

**Issue-Specific Action Plan
Item No. III.c Rev. 3**

TITLE PREREQUISITE TESTING

INTRODUCTION

This ISAP addresses validation of Prerequisite Test conditions by craft personnel instead of by startup test engineers, and determine the effect of that activity on the adequacy of the test program.

SUMMARY AND RECOMMENDATIONS

This Action Plan will satisfy the NRC's concern regarding Prerequisite Testing and correction of the identified deficiency, provided that the following items are addressed on the Plan.

COMMENTS

- Sections 4.1.2, 4.1.3, 4.1.7
Define how instruction will be accomplished. Training? Documented?
QA/QC interface should be described.

**Issue-Specific Action Plan
Item No. III.d Rev. 3**

TITLE PRE-OPERATIONAL TESTING

INTRODUCTION

This ISAP deals with the problem of the System Test Engineers not being provided with current design information in a controlled manner. There are no indications of deficient testing activities attributed to this problem.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concerns when implemented.

COMMENTS

None

**Issue-Specific Action Plan
Item No. V.a Rev. 1**

TITLE INSPECTION FOR CERTAIN TYPES OF SKEWED WELDS IN NF SUPPORTS

INTRODUCTION

This ISAP addresses the adequacy of certain types of skewed welds in NF supports (allegation AQW-73, SER 10, page N-199).

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will not satisfy the NRC's concern regarding this specific issue. The sample plan (Section 4.1.3) and the definition of a reject are incompatible as currently written. Since this ISAP addresses a quality control (inspection) issue, the acceptance or rejection of the sample should be based on the subsequent inspection and not analysis.

Inspections are a QA/QC function. Therefore, QA/QC should be called out in participants section.

COMMENTS

None.

**Issue-Specific Action Plan
Item No. V.b Rev. 1**

TITLE **IMPROPER SHORTENING OF ANCHOR BOLTS IN STEAM GENERATOR UPPER
LATERAL SUPPORTS**

INTRODUCTION

This ISAP deals with the improper shortening of the bolts which are threaded into Richmond inserts for the upper lateral steam generator supports. The FSAR, SER 8 and the program plan were reviewed to determine if the ISAP would properly address the issue presented.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue provided that the following comments and recommendations are incorporated. The method of sampling and disposition of potential deviations may give erroneous results, causing incorrect conclusions.

In reference to Section 4.1.3.1, a minimum sampling of 60 bolt engagements will be taken. The sampling is taken to determine if minimum thread engagement requirements have been met. A 95/5 confidence will be achieved if zero defects are found. The proposed method of eliminating a defect, if it is demonstrated that less thread engagement is acceptable by analysis, should be deleted if the sample taken is random as proposed. In addition, any expanded populations should segregate manufactured items such as piping support components, from items field installed by construction.

COMMENTS

- **Section 2.0, 1st paragraph**

Second sentence requires punctuation change?

- **Page 8, Logic Diagram**

The logic diagram could better show the "flow" of activities; for instance, two leads enter the activity "perform UT inspection of steam generator upper lateral restraint bolts to determine bolt engagements"; however, no activities follow?

**Issue-Specific Action Plan
Item No. V.c. Rev. 1**

TITLE DESIGN CONSIDERATION FOR PIPING SYSTEMS BETWEEN SEISMIC
CATEGORY I AND NON-SEISMIC CATEGORY BUILDINGS

INTRODUCTION

This ISAP addresses the FSAR commitment to provide isolation between the seismic Category I piping systems and the non seismic Category I piping systems by separation barrier or restraint.

This issue has been described in NUREG 0797 Supplement No. 10 as SRT-3.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue, provided that the following comments and recommendations are incorporated.

This ISAP should require specific procedures to be prepared by S&W to preclude the occurrence of this issue during the Pipe Stress and Pipe Support Qualifications (Item No. IX, Appendix C, Attachment 2).

COMMENTS

- Page 3, Section 3.2

The root cause and generic implications should be identified for all issues.

- Page 3, Section 4.1

In the second sentence, "in the form of written project procedures" should be added to the end of the sentence.

- Page 4, Section 4.1.4

Add 4.1.2.

**Issue-Specific Action Plan
Item No. V.d Rev. 1**

TITLE PLUG WELDS

INTRODUCTION

This ISAP addresses the adequacy of uncontrolled plug welding of misdrilled holes in pipe supports, cable-tray supports, and base-plates in Units 1 and 2 (allegation AW-14, SER 10, page N-57).

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will not satisfy the NRC's concern regarding this specific issue. The sample plan (Section 4.1) and the definition of a reject are incompatible as currently written. Since this ISAP addresses a quality control (inspection) issue, the acceptance or rejection of the sample should be based on the subsequent inspection and not on analysis. The criterion for expanding the sample should also be based on the same criterion.

Since there is an uncertainty of whether a plug weld which is covered by paint can be detected, this uncertainty should be factored into the basis of the sample size. This will have the effect of increasing the sample size. This uncertainty may be minimized by prior testing (i.e., obtaining a sample of structural steel which has been plug welded and then painted in accordance with painting standards. This steel can then be inspected by the QC inspectors to determine the percentage of welds which would be missed.)

COMMENTS

None.

**Issue-Specific Action Plan
Item No. V.e Rev. 1**

TITLE INSTALLATION OF MAIN STEAM PIPES

INTRODUCTION

This ISAP addresses the adequacy of specifications and procedures for the support of the main steam line during flushing and for the use of temporary supports for piping and equipment in general. Further, this ISAP addresses the assessment of the conditions of the main steam piping subsequent to final support installation.

This issue is described in detail in NUREG 0797 Supplement No. 10 as AP-13.

SUMMARY AND RECOMMENDATIONS

This Action Plan, as defined, will satisfy the NRC's concerns if the following comments and recommendations are incorporated.

This action plan attempts to summarize the issue (AP-13) described in NUREG 0797. NUREG 0797, however, provides more detail and is a more complete story. TES recommends that AP-13 is directly referenced in the action plan.

The effects of the loads imposed on the steam generator nozzles, as a result of this pipe re-positioning prior to final welding, must be included in the evaluation of the steam generator nozzles (or other affected nozzles). This is consistent with paragraph NB/NC/ND-3623.1 of the ASME BPVC, Section III.

COMMENTS

- **Page 1, Section 2.0, 1st paragraph**

This statement is too general and should specify the correction of the deficiencies quoted in the TRT review. The word "quality" seems to be used in a general sense throughout the Action Plan and, therefore, is unclear. It may be better if specific criteria are used.

- **Page 2, Section 2.0, 3rd and 4th paragraphs**

Reference to "2.2.1 through 2.2.3 above" seems incorrect. There are no paragraphs listed as such.

Issue-Specific Action Plan
Item No. V.e Rev. 1
(concluded)

- **Page 5, Section 4.2, 7th paragraph**

"highly stressed" is not specific enough criteria to identify locations for reinspection.

- **Page 6, Section 4.2, last paragraph**

Specifications should include stress analysis of steam (or other gaseous) piping systems subjected to flushing and hydrostatic testing (see NB/NC/ND 3623.1 of ASME BPVC, Section III).

**Issue-Specific Action Plan
Item No. VI.a Rev. 1**

TITLE GAP BETWEEN REACTOR PRESSURE VESSEL REFLECTIVE INSULATION AND
THE BIOLOGICAL SHIELD WALL

INTRODUCTION

This ISAP deals with the civil/structural allegation of an unacceptable gap between the reactor pressure vessel reflective insulation (RPVRI) and the shield wall, which resulted in unacceptable cooling of the RPV during hot functional testing. SER 8 and the program plan were reviewed to determine if the ISAP would properly address the issue presented.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue provided that the following comments and recommendations are incorporated.

Details of scope and methodology are sketchy and should be revised after the exploratory phase is complete.

COMMENTS

- **Cover Sheet**

Cover sheet indicates action plan results; typographical error?

- **Section 4.1.1**

This section pertains to background more than "Scope and Methodology".

**Issue-Specific Action Plan
Item No. VI.b Rev. 1**

TITLE POLAR CRANE SHIMMING

INTRODUCTION

This ISAP deals with the miscellaneous allegation which identifies problems with the shimming of the polar crane rail and rail support. As a result of the TRT investigation, a number of additional issues such as circumferential movement, cadwelds broken, and additional gaps were identified. The FSAR, SER 8 and the program plan were reviewed to determine if the ISAP would properly address the issue presented.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue provided that the following comments and recommendations are incorporated.

An assessment of the use of the polar crane in its present state should be made to determine if it has had a detrimental effect on the integrity of the system.

If any modifications are made, the load test should be repeated.

COMMENTS

- Section 1.0

It is assumed that the cadwelds described in this section are nonstructural.

- Section 4.1.1

CPRT should insure that all requirements of the "Crane Manufacturer's Association of America, Inc. (CMAA) Specification 70" are met as required by Section 3.8.3.2.3 of the FSAR. The plan should be specific in identifying which standards it will address, as stated in the ISAP format (Attachment 3 of the basic plan). Mechanical guides which prevent derailling should also be evaluated in accordance with Section 3.8.3.1.2 since rail movement could impair this important system. (Failure could result in dynamic loads on the rail.)

Issue-Specific Action Plan
Item No. VI.b Rev. 1
(concluded)

- **Section 5.0**
Why is there no date adjacent to "crane performance history:"?
- **Page 7, Flowchart**
In the flowchart some paths do not have directions (arrow-heads) defined.

**Issue-Specific Action Plan
Item No. VII.a.1 Rev. 0**

TITLE MATERIAL TRACEABILITY

INTRODUCTION

This action plan assesses the adequacy of the material traceability control systems implemented during construction at CPSES. Implementation and completion of this plan is dependent on the output from ISAP's VII.b.1, VII.b.3 and VII.c.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding material traceability provided, as stated in Section 4.1.2.3, all SSER findings related to material traceability are identified, reviewed, and the action taken to resolve the finding has been verified.

The reviewer recommends that the identification of all SSER findings should be listed in this action plan and the plan should contain provisions to document the verification of resolution of the findings.

COMMENT

- Page 1, Section 2.0, 1st paragraph.

The NRC requested examination of the potential safety implications . .

Safety implications are not addressed in this plan.

**Issue-Specific Action Plan
Item No. VII.a.2 Rev. 0**

TITLE NONCONFORMANCE AND CORRECTIVE ACTION SYSTEM

INTRODUCTION

This action plan will evaluate individual NRC, TRT and SSER findings and provide a comprehensive evaluation of the CPSES construction site nonconformance, corrective action and 10CFR50.55(e) reporting systems.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC concerns regarding the nonconformance and corrective action systems provided that the following recommendations and comments are addressed in the action plan.

- **Page 4, Section 3.1**, last paragraph on page states: "This plan is written . . . as well as to address the detailed individual findings listed by the TRT."

The reviewer recommends that the identification of those individual findings should be listed in this action plan and the plan should contain provisions to document the resolution of the findings. This applies to nonconformances corrective action and 10CFR50.55(e) as covered in the plan .

Checklists for the review of nonconformance reports should include an attribute for a check of the signatures of appropriate personnel as required by procedures and the NCR form.

COMMENTS

- **Page 4, Section 2.0**

The NRC requested examination of the potential safety implications.

Safety implications are not addressed in this plan.

- **Page 6, Section 4.1.1.2**

Sample size criteria should be corrected to read 95/05.

- **Page 7, 2nd dash item**

Acceptable alternate - is vague. Who determines acceptable? Should read "or in accordance with the NCR disposition."

**Issue-Specific Action Plan
Item No. VII.a.3 Rev. 0**

TITLE DOCUMENT CONTROL

INTRODUCTION

The scope of this action plan is to provide confidence that, although problems were identified over a period of time in the implementation of the Document Control program during the construction phase of CPSES, the installed hardware is in accordance with the current design requirements.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding document control provided that the following recommendations and comments are addressed in the action plan.

Page 3, Section 3.1.5, states that the plan will assure that the specific TRT and SSER items pertaining to Document Control have been addressed.

The reviewer recommends that the identification of the individual items identified in SSER-11, Appendix P, Section 2.2, Pages P-5, -6 and -7 should be listed in this action plan. The plan should contain provision to document the resolution of the item. The item described in the action plan on page 4, Section 3.1.6 should be included in this listing.

COMMENTS

- Page 7, Section 4.3

The CPRT Program Plan, Rev. 2, Attachment 3, Section 4.0, Page 2 requires a discussion on training . . .

Training is not discussed in this action plan.

- Page 7, Section 4.4

The CPRT Program Plan, Rev. 2, Attachment 3, Section 4.0, Page 2 requires the identification of procedures.

Procedures are not identified in this action plan.

**Issue-Specific Action Plan
Item No. VII.a.4 Rev. 0**

TITLE **AUDIT PROGRAM AND AUDITOR QUALIFICATION**

INTRODUCTION

This action plan will assess and report on the adequacy of the current TUEC QA Audit Program. Including TUEC's response to the Region IV Notice of Violation.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding TUEC QA Audit Program and Auditor Qualifications, provided that the following recommendations and comments are addressed in the action plan.

- **Page 2, last paragraph**

The letter D.R. Hunter to M.D. Spence dated February 15, 1985 should be included as an attachment to this plan, and the letter furnished for review prior to approval of this action plan.

- **Page 2, last paragraph**

Last sentence states: "For this violation, the action plan will describe . . . etc."

Section 4.0 TUEC action plan does not address how this action plan will accomplish that action to be described.

- **Page 4, Section 4.1.2.2**

Should also include the past audit staff.

Note: The reviewer acknowledges that past auditor qualification concern may be addressed in the TUEC response to the Region IV Notice of Violation.

- **Page 5, Sections 4.2.1.1 and 4.2.2.1**

Applicable information and documentation should be identified in this section.

Issue-Specific Action Plan
Item No. VII.a.4 Rev. 0
(Continued)

The action plan should include a listing of the TRT's identified concerns or deficiencies which are included in SSER-11, Section 2.7, Pages P-22 and P-23. The plan should contain provisions to document the resolution of the concerns and deficiencies. The plan should contain provisions to document the verification of resolution of the concerns and deficiencies.

COMMENT

It is suggested that this action plan has an interaction with ISAP VII.a.5 Management Assessment which should be described herein.

- **Page 1, Section 2.0**

The NRC requested examination of potential safety implications.

Safety implications are not addressed in this plan.

The NRC requested that TUEC consider the implications of these findings on construction quality.

These implications are not discussed in this plan.

- **Page 5, Section 4.3**

Program Plan Attachment 3, Page 2, requires that training be discussed.

Training is not addressed in this plan.

- **Page 5, Section 4.4**

Section 4.4.1 does not comply with the program plan, Attachment 3, Section 4.0, Page 2 procedures to be used.

- **Page 6, Section 4.5**

Should include ANSI N45.2.12, Draft 3, Revision 0.

Issue-Specific Action Plan
Item no. VII.a.4 Rev. 0
(Continued)

The reviewer acknowledges that this plan addresses the adequacy of the current QA Audit Program. However, specific concerns were identified which must be addressed by the CPRT and must include the NRC actions requested in Section 2.0. This plan should describe how that will be accomplished.

**Issue-Specific Action Plan
Item No. VII.a.5 Rev. 0**

TITLE MANAGEMENT ASSESSMENT

INTRODUCTION

The Review Team will review in-place Management Assessment Programs in other organizations and will consult with recognized authorities such as INPO to obtain a consensus on the criteria for an adequate and effective Management Assessment Program.

The Review Team will then evaluate the current CPSES Management Assessment Program against the criteria developed above and recommend appropriate revisions to the CPSES Program.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding TUEC's management failure to assess the overall effectiveness of the Site QA Program provided that the following comments and recommendations are addressed in this plan.

- **Page 1, Section 2.0**

The plan does not address the first paragraph of the action requested by the NRC.

- **Page 1, last paragraph**

The letter R.D. Hunter to M.D. Spence dated February 15, 1985 should be included as an attachment to this plan.

The action plan scope and methodology should be revised to include the activity which is described in the last sentence of the paragraph.

- **Page 2, Section 4.1.1, second paragraph**

Should be revised to state that the review team will then evaluate the CPSES Management Assessment Program which was in-place during construction of CP against . . .

**Issue-Specific Action Plan
Item No. VII.a.5 Rev. 0
(Continued)**

COMMENTS

- **Page 3, Section 4.2**

Should define the responsibilities and personnel for the organization that will include the descriptive information which is detailed in the last paragraph on page 1, last sentence.

- **Page 3, Section 4.2.1.2**

Is "Dallas" QA Manager the correct title?

- **Page 4, Sections 4.3 and 4.4**

Do not comply with the CPRT Program Plan attachment 3. Training is not discussed and procedures are not identified.

**Issue-Specific Action Plan
Item No. VII.a.6 Rev. 0**

TITLE EXIT INTERVIEWS

INTRODUCTION

This action plan will evaluate the adequacy of the policies, procedures and activities of the CPSES site Ombudsman and the CPSES SAFETEAM in identifying and resolving CPSES site personnel concerns which have potential safety implications. This plan also provides for other CPRT investigations that will determine the overall adequacy of installed hardware. This action plan will ensure an adequate program is now in place.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding exit interviews provided that the following comments are addressed in the action plan. A definition of other CPRT investigations which will address past concerns involving exit interviews is required (Reference: 3.2 and 4.1.1).

COMMENTS

- Page 2, Section 4.1.1

The last sentence should identify the program, e.g., . . . an adequate program is now in place.

- Page 2, Section 4.1.2.1 states: "Review procedures . . . "

- Page 3, Section 4.1.2.2 states: "Evaluate the implementation of procedures."

- Page 4, Section 4.4 does not identify the procedures. (See CPRT Program Plan, Attachment 3, Section 4.0, Page 2.

- Page 4, Section 4.3

Is TUGCO's Program Plan the appropriate title?

If CPRT Program Plan is the appropriate title, that plan is now Revision 2.

Issue-Specific Action Plan
Item No. VII.a.6 Rev. 0
(Continued)

- Page 5, Section 4.6 states: "Decision criteria not applicable."

This does not comply with the CPRT Program Plan, Attachment 3, Page 3, second paragraph which states: "Describe the decision criteria for closing out this item."

**Issue-Specific Action Plan
Item No. VII.a.7 Rev. 0**

TITLE HOUSEKEEPING AND SYSTEM CLEANLINESS

INTRODUCTION

The scope of this action plan is to determine the validity of the current housekeeping system and system cleanliness program for Units 1 and 2. Results of other action plans, procedural requirements, surveys, etc. will be analyzed to determine any impact on hardware and programmatic implications.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concerns regarding housekeeping and system cleanliness provided that the following comments and recommendations are addressed in the action plan.

The CPRT should review SSERS 7, 8, 9, 10, and 11 to assure that all identified housekeeping and system cleanliness issues are included in this plan, or are addressed in other action plans.

Section 4.1 scope and methodology should be revised to include the evaluation of the additional concerns identified in SSER-11, Appendix P.

COMMENTS

- Page 1, Section 1.0

This action plan should include housekeeping concerns identified by the TRT which are described in SSER-11, Appendix P, Page P-12 (AW-65), Page P-13 (AP-6).

- Page 2, Section 3.1

The last sentence is garbled.

It is the opinion of the reviewer that the concern addressed in ISAP V.b improper shortening of anchor bolts in SG upper lateral supports, although there was "debris" in the holes, is not related to housekeeping practices. This concern is not appropriate for review in this action plan (VII.a.7) and should be deleted from Section 4.1.2.1. Also note that the holes were not drilled.

Issue-Specific Action Plan
Item No. VII.a.7 Rev. 0
(Continued)

- **Page 4, Section 4.1.2.3** should identify flush procedure FP-55-08.

Also, the next to last line should clearly state: "The adequacy of only two swipe tests as required by the procedure" (see Section 1.0 Description of Issues).
- **Page 4, Section 4.1.2.5**

Recent TUGCO information is vague. How recent?

Note: The word recent is also used in the third paragraph, this section on page 5.

Will the review be performed in accordance with a checklist? - How will the data be recorded (documented) for the detailed analysis to be conducted in Section 4.1.2.6.
- **Page 5, Section 4.1.2.6, third paragraph**, sentence that states: ". . . perform required reinspections."

Should address prepared checklists.
- **Page 6, Section 4.2.2.1**

Address reinspections identified in Section 4.1.2.6
- **Page 7, Section 4.3, second paragraph**

Identify other participants and organizations. Also note this section does not address training.
- **Page 7, Section 4.4.2** is an open item to be completed prior to approval of this plan.

**Issue-Specific Action Plan
Item No. VII.a.8 Rev. 0**

TITLE FUEL POOL LINER

INTRODUCTION

The scope of this action plan is to evaluate irregularities in fuel pool liner travelers and related documentations, to determine if the QA/QC program, and its implementation, was adequate to assure that completed inspection records accurately reflect work performed and that required acceptance criteria were met. Although reexamination of fuel pool liner welds is not required under this action plan, the generic implications of the documentation evaluation may result in review of documentation and work acceptability of other safety related areas.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern related to fuel pool liners provided that the following comments are addressed in this plan.

COMMENTS

- **Page 2, last paragraph on page. Pertains to QA/QC aspects of fuel pool liner welding**

The QA/QC concerns are identified in SSER-11, Appendix P, Page P-20 (AQW-17 and AM-11 etc.) and SSER, Appendix O. If the CPRT decides to evaluate QA/QC welding concerns in this plan, the SSER's should be reviewed to assure that all identified concerns are addressed.

- **Page 3, Section 4.1.2.2, first paragraph, last sentence**

Confidence level should be expressed as 95/05.

This section should describe the conditions that will necessitate expansion of the sample.

- **Page 4, first paragraph (partial)**

How is the result of this review recorded.

This section should address the use of checklists of attributes.

**Issue-Specific Action Plan
Item No. VII.a.8 Rev. 0
(Continued)**

- **Page 5, Section 4.3**

This section addresses certification of inspectors. This plan activity is essentially documentation review. This section should be revised to describe the personnel qualifications required for the function performed which is not test and inspection.

- **Page 5, Section 4.4**

Procedures are not identified. This does not comply with the CPRT Program Plan, Attachment 3, Page 2 procedures to be used.

- **Page 6, Section 4.6**

Does not comply with CPRT Program Plan, Attachment 3, Page 3, Section 5.0 which states describe the criteria for closing out this item.

**Issue-Specific Action Plan
Item No. VII.b.1 Rev. 0**

TITLE ON SITE FABRICATION

INTRODUCTION

The scope of this action plan covers both Units 1 & 2 and is to determine if the material control discrepancies identified by the NRC in the on-site fabrication shop have any safety validity significance or generic implications.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding on-site fabrication provided that the following comments and recommendations are addressed in the plan.

COMMENTS

- **Page 2, Section 4.1.1, first paragraph**
What is safety validity significance.
- **Section 4.1.1.1**
 - There are no "Fabrication Document Packages."
 - The first and third dash items can only be determined by a review of the material requisition files in the fabrication shop.
 - The second dash item applies to a procedural inadequacy - See Section 1.0, Item D and consider revising this section.
- **Page 4.1.2.5, first paragraph**
. . . of the selected items . . .
This should read selected sample items.
- **Page 6, Section 4.3**
. . . evaluation of findings . . .
Is "Findings" the appropriate definition? e.g., deficiency. Also, this section does not address training. See CPRT Program Plan, Attachment 3, Page 2.
- **Page 7, Section 4.4**
When developed should be identified here.

**CPRT Action Plan
Item No. VII.b.2 Rev. 0**

TITLE VALVE DISASSEMBLY

INTRODUCTION

The scope of this action plan is to evaluate the proper reassembly of valves which required disassembly. Valves to be considered are those installed in Units 1 and 2 and common to both and which have been disassembled or may require disassembly regardless of reason for disassembly or plant system.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue, provided that the reinspections performed for expanded samples must consider all attributes.

**Issue-Specific Action Plan
Item No. VII.b.3 Rev. 0**

TITLE PIPE SUPPORT INSPECTIONS

INTRODUCTION

This ISAP addresses the adequacy of as-built documentation of safety-related pipe support installations.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will not satisfy the NRC's concern regarding this specific issue.

In accordance with Appendix A, Attachment 5, trending of deviations needs to be addressed and incorporated in this ISAP.

COMMENTS

- Page 2, Section 4.1

The method for increasing the sample size, if required, is unclear.

- Page 7, Section 4.4, 2nd paragraph

Should "Design Significant Discrepancies" be "Safety Significant Discrepancies"?

- Page 7, Section 4.4

Reinspection performed for expanded samples must include all attributes.

**Issue-Specific Action Plan
Item No. VII.b.4 Rev. 0**

TITLE HILTI ANCHOR BOLT INSTALLATION

INTRODUCTION

This ISAP addresses the adequacy of Hilti anchor bolt installation on pipe supports and electrical raceway supports.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue if the following comments and recommendations given below and in ISAP VII.b.3 and VII.b.5 are incorporated.

COMMENTS

- **Page 5, Section 4.5**

The sampling plan must be revised to be consistent with comments in ISAP VII.b.3.

- **Page 5, Section 4.7**

The decision criteria have not been written at this time. This section must be reviewed before implementation of this ISAP.

**Issue-Specific Action Plan
Item No. VII.b.5 Rev. 0**

TITLE ELECTRICAL CABLE TRAY RACEWAY SUPPORT INSPECTIONS

INTRODUCTION

This ISAP addresses the adequacy of the electrical conduit supports and cable tray hanger inspections.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will satisfy the NRC's concern regarding this specific issue if the following comments and recommendations are incorporated.

COMMENTS

- **Page 8, Section 4.6**

A minimum sample size is not given nor any information on how the sample will be obtained. This is inconsistent with plan requirements. Will the sample be random or will it be based on results of other ISAP's (i.e., VII.c and VII.a)?

- **Page 8, Section 4.7**

No specific acceptance criteria is stated. There is also no criterion given for expanding the sample size.

- **Page 8, Section 4.8**

This section is acceptable if this ISAP is implemented upon completion of ISAP VII.c.

**Issue-Specific Action Plan
Item No. VII.c Rev. 0**

TITLE CONSTRUCTION REINSPECTION/DOCUMENT REVIEW PLAN

INTRODUCTION

This action plan is self-initiated and includes a reinspection/documentation review of QC accepted safety-related construction work activities at CPSES. It includes those areas that have not been identified as areas of concern by external sources.

The primary reasons that this self initiated action plan has been developed is that it represents the most direct, reliable, and achievable method of providing additional confidence that currently unidentified concerns related to the quality of construction of the hardware at CPSES will be identified, evaluated, and resolved.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, will not satisfy the NRC's concern regarding this issue.

It is not obvious that safety significant attributes can be determined for a population. These attributes may be item, location or function specific. The ISAP must provide the attributes which define a population.

COMMENTS

- **Page 1, second paragraph**

The scope and methodology does not address the statement in this paragraph pertaining to the qualification of historical QC Inspectors.

- Same comment for alleged intimidation of QC Inspectors.

- **Page 2, Section 4.1, first paragraph, last sentence**

Should specifically identify where located in Appendix B - Also, the reviewer recommends that the definitions should be included here for convenience since each action plan participant may not have a copy of Appendix B.

- **Page 2, third paragraph**

Should state . . . attributes of completed and QA accepted hardware .

- **Page 3, first paragraph**

Should identify the QA/QC review team instruction.

**Issue-Specific Action Plan
Item No. VII.c Rev. 0
(Continued)**

- **Page 3, fourth paragraph**
Should state . . . under other CPRT action plans . . .
- **Page 3, 4.1.2.1, first paragraph, last sentence**
Word "criteria" should this be confidence level 95/95 or should this be expressed as 95/05.

Note: Use of the phraseology is not consistent within plans and in all action plans.
- **Page 3, Section 4.1.2.1, second paragraph**
Words "in lieu of"

It is the reviewer's understanding that the primary purpose of this plan is to perform reinspection and document review, therefore, reinspections are not performed "in lieu of".
- **Pages 3 & 4, Section 4.1.2.1, second and third paragraph**
Although the reviewer was able to achieve an understanding, these two paragraphs are confusing.
- **Page 4, Section 4.1.2.2, first paragraph**
Should 95/95 be expressed as 95/05?

Also see comment for inconsistency Section 4.1.2.1.
- **Page 4, Section 4.1.2.3**
Is concrete a good example?
- **Page 5, first paragraph**
Identify a QA/QC review team instruction.
- **Page 5, Section 4.1.3, second paragraph**
Word "Observable". Is this appropriate??

Does this mean accessible?

**Issue-Specific Action Plan
Item No. VII.c Rev. 0
(Continued)**

- **Page 6, first paragraph (partial)**
What does this mean? - What purpose.
- **Page 6, second paragraph**
As understood by reviewer, the last sentence only requires documentation of acceptability of attributes and does not require description of a defect.
- **Page 6, Section 4.1.4, second paragraph**
Will the inspector work with an inspection checklist or a population checklist?
Same comment, third paragraph.
- **Page 7, first paragraph, second sentence**
What equipment? Is this the item inspected. Also, identify the written instruction.
- **Page 8, first paragraph**
. . . DR is valid . . .
Word should be invalid to be in context with the lead in statement on page 7 - a DR may be deemed to be invalid by any of four methods.
- **Page 8, Section 4.1.6.2, first paragraph**
This paragraph should be in Section 4.1.6.1 which addresses invalid DR's.
Note the plan does not address the disposition (?) of invalid DR's e.g., retained as records??
- **Page 9, Section 4.1.6.4**
What are augmenting instructions? Identify.

**Issue-Specific Action Plan
Item No. VII.c Rev. 0
(Continued)**

- **Page 11, Section 4.1.10**
Should address collective assessment.
- **Page 11, Section 4.2**
When prepared. Should be identified here.
- **Page 11, Section 4.3.2.1**
States: Review valid deviations.
See Appendix E, Page 3, Item (b) - All deviations are valid. Delete word valid.
- **Page 13, Section 4.4**
Training is not addressed.
- **Appendix B, Page 7**, paragraph which addresses the Category 2 ISAP states in part, that it will resolve the concerns regarding the potential occurrence of harassment or intimidation of QC Inspectors. The Category 2 ISAP (VII.c) does not address the subject of harassment or intimidation.

**Discipline-Specific Action Plan
Item No. VIII Rev. 0**

TITLE CIVIL/STRUCTURAL DISCIPLINE SPECIFIC ACTION PLAN

INTRODUCTION

The action plan for the civil/structural discipline (DSAP) is both Issue-Responsive and Self-Initiated as defined in Section IV of the program plan. The self-initiated portion of this DSAP includes the areas of concrete, structural steel, pipe whip restraints, jet shields, HVAC and "other" supports. The issue-responsive portion of DSAP includes the steam generator supports, polar crane supports, cable tray supports, and conduit supports. The number of external issues raised in the area of cable tray and conduit supports necessitated the formation of a subprogram (CTCS). This subprogram has been developed to evaluate and resolve all external source issues and to establish design adequacy for this hardware by analyses, testing and/or direct modifications.

The self-initiated portion of the plan describes the initial "exploratory" stage as defined in Section V of the program plan. The exploratory stage consists of evaluating items based on a random sample. In this exploratory stage, the depth and scope as well as root cause and generic implications will be identified. The DSAP will be revised accordingly as required by Section V of the program plan.

The applicable sections of the following documents have been reviewed:

FSAR

IAP Letters: March 29, 1985 - Generic Issues Summary
 April 23, 1985 - Review Issues List Transmittal
 June 21, 1985 - RIL, Cable Trays, Rev. 10

SER-8, -10, -11

SUMMARY AND RECOMMENDATIONS

The issue-responsive portion of the DSAP will not satisfy the NRC's concerns regarding the Cable Tray and Conduit Support subprogram. The self-initiated portion of the DSAP with regard to other Civil/Structural areas will not provide the level of confidence defined in the third objective of the plan.

Discipline-Specific Action Plan
Item No. VIII Rev. 0
(continued)

The HVAC and other support designs which have been selected will only be reviewed for modeling assumptions, analysis procedure, design methodology, and interface between vendors and design organization. This portion of the civil/structural design review must also address the design process, including all issues raised in the cable tray/conduit support areas, i.e., choice of anchorage, design changes, etc.

The cable tray/conduit support subprogram needs to define the root cause and any generic implications prior to the initiation of the subprogram. This is required for the CTCS subprogram and for the review and evaluation of the HVAC plan. The sample size of the two systems for the HVAC supports needs further definition. What is a system and do two systems constitute an acceptable sample relative to population size.

The self-initiated portion of the DSAP provides a "vertical slice" approach, with exploratory samples in specific areas. The size of the random samples presented in this DSAP for some topics is inadequate to demonstrate confidence in extrapolation of the results to total populations. For instance, in the area of equipment mounting, only one mechanical and one electric mounting will be looked at.

One area of concern not mentioned is embedments. Since many pipe, conduit, and cable tray supports are currently being reanalyzed within the current scope of the plan, the loading on the embedments, including items such as Richmond inserts, and the loading on the structure as a whole must be reevaluated. This DSAP does not address embedments or load tracking.

The sample size of design activities in general should be such that the population selected will be extracted from all design groups involved within, as well as external to, the Architect-Engineer. In addition, the method of sampling used should be included in the DSAP. The basis of sampling for the concrete and steel analyses and design is not known, nor is the size and scope of a "calculation" as presented in Section 4.2.2.1 known. In the review of the concrete containment, the liner should be included in the scope since it is integrally attached. The DSAP has not defined a "reject" as specified in the general DSAP format presented in Attachment 4 of the program plan.

Discipline-Specific Action Plan
Item No. VIII Rev. 0
(continued)

The decision criteria, identification of specific procedures, and schedule have not been incorporated in Revision 0 of the DSAP.

The scope and methodology of the DSAP does not define the tasks to be performed under certain conditions (i.e., scope expansion) as defined in Section 4.0, Attachment 4, of the program plan.

One aspect of the second objective of the plan is to analyze the generic implications of each safety-significant-deficiency root cause. Implementation of the plan is by execution of DSAP's. The ISAP's in the civil/structural discipline have not as yet determined any root causes; therefore, Revision 0 of the DSAP will not fulfill the second objective.

In Section 4.1.2.2, the loading from supports attached to the upper lateral steam generator support must be included in the analysis. The details of concrete and steel reviews are not presented in their respective sections as indicated in Items 3 and 4.

Summary and Recommendations of the Subprogram

The Cable Tray and Conduit Supports (CTCS) subprogram, as currently structured, does not rely on current industry practice in the design area. Page 6 of Item No. VIII states:

"The objective of the CTCS program will be to demonstrate functional performance by verifying overall system performance. Emphasis will be directed at verification of adequate anchorage and support to insure stable behavior."

The subprogram is heavily research oriented and does not comply with the approach used on Unit 2. The criterion, which will be developed from this subprogram, appears to be based on functional capability of cable trays after (or during) a seismic event, whereas the FSAR states that supports will meet AISC criteria. These functional capability criteria could allow support failure, yet not be capable of addressing system reliability.

The sample size and number of tests may not result in a generic criterion which can be applied to all cable trays and supports and are therefore not defensible. The subprogram plan as written will not demonstrate compliance with FSAR commitments.

**Discipline-Specific Action Plan
Item No. VIII Rev. 0
(continued)**

COMMENTS

- **Pages 5-9, Section 4.0**

Since the cable tray/conduit support subprogram is detailed in Tasks VIII.a through VIII.g, TES made few comments in the foreword relative to the CTCS program and considered the foreword only as an overview/summary of the specifics contained in these tasks.

- **Page 4, Section 3.1, Last Paragraph**

What is meant by "undesirable behavior"?

- **Pages 21-25, Table VIII-2**

In review of the CYGNA letters of April 23, 1985 and June 21, 1985, and Table VIII.2, the following items were found omitted from the table:

Item 3F, Richmond insert spacing and prying factor, was not included in the table.

Item 3I, Base angle boundary condition assumptions, should be added to the table.

Item 4C, Effect of weld undercut on section properties, should be added to the table.

Items 12B, C, and D in the April 23 letter were not listed.

Items 12E and F in the June 21 letter should be added to the table.

Item 24, Design flexural members, should be added to the table.

Item 25, Cable tray qualification, should be added to the table.

**Discipline-Specific Action Plan
Item No. VIII Rev. 0
(continued)**

TITLE **TASK VIII.a: CABLE TRAY/CONDUIT SUPPORTS - IDENTIFICATION OF
CRITICAL PARAMETERS AND PHYSICAL MODIFICATIONS**

COMMENTS

- **Page 1, Section 1.0**

If modifications are considered to be more expeditious, then reasons (discrepancies) must be identified, and root cause and generic implications should be considered for overall design.

- **Page 1, Section 3.0**

This section is confusing. The differences in design and construction of each unit should be discussed, including any reconciliation programs currently underway.

- **Page 2, Section 4.1, 1st paragraph**

What is meant by "Once the generic supports are the same in both units,...."?

- **Page 2, Section 4.1, 3rd paragraph**

Does this imply that systems will be analyzed for just the cables in the trays, which will severely limit future additions of cables. Are heavily loaded systems always the worst case? A lightly loaded system may have less damping, resulting in higher loads.

TITLE **TASK VIII.b: CABLE TRAY/CONDUIT SUPPORTS - POPULATION IDENTIFICATION, SAMPLE SELECTION AND AS-BUILDING**

COMMENTS

- **Page 1, Section 2.0**

More explanation of the sampling plan should be given. Mention is made of a random sample of 60 runs, an engineering

**Discipline-Specific Action Plan
Item No. VIII Rev. 0
(continued)**

sample of 10 to 15 runs, and an analysis of two runs. "A random sample of runs, representative of the total population, will be analyzed later." How are these tied together. Will this be done for both cable tray and conduit or do numbers represent totals for both?

- Page 3, Section 4.1.1

What are the principal attributes?

- Page 3, Section 4.1.2

What are the applicable statistics?

- Page 4, Section 4.3

Included as part of the as-building should be the direction of the tray, horizontal, vertical or sloping, and any additional attachments to the trays or supports.

TITLE TASK VIII.c: CABLE TRAY/CONDUIT SUPPORTS - DETERMINATION OF GOVERNING LOADS

COMMENTS

- Page 2, Section 4.0

The effect of safety Category II loadings (due to failure) should also be considered on Category I structures and supports.

TITLE TASK VIII.d: CABLE TRAY/CONDUIT SUPPORTS - TESTING

COMMENTS

- Page 1, Section 1.0, 1st paragraph

What is meant by "...system stability and establish appropriate margins of safety."?

**Discipline-Specific Action Plan
Item No. VIII Rev. 0
(concluded)**

- **Page 2, Section 3.0**
How does sample of five systems to be analyzed tie in with samples in Task VIII.b and the two sample runs mentioned in the last paragraph in this section?
- **Page 2, Section 4.0**
What is meant by "...to demonstrate overall design adequacy and acceptable system functional performance..." and will this meet FSAR commitments?
- **Page 3, Section 4.2**
What is meant by the word "modification"? Are these physical, analytical, or do they pertain to the sample size?
- **Page 3, Section 4.3**
What is the size of the random sample to be extrapolated to the entire population?

TITLE TASK VIII.g: COMPONENT DESIGN EVALUATION

COMMENTS

- **Page 3, Section 4.3**
Will the acceptance criteria also meet the FSAR commitments and applicable codes?
- **Page 3, Section 4.4**
If the margin of a component is negative, then this component would no longer meet the code and should be modified.

**Discipline Specific Action Plan
Item No. IX Rev. 0**

TITLE PIPING AND SUPPORTS DISCIPLINE SPECIFIC ACTION PLAN

INTRODUCTION

This DSAP addresses the Piping and Supports disciplines specifically with respect to issues raised by external sources and more generally with respect to the technical adequacy of the piping and support designs.

The applicable sections of the following documents have been reviewed:

- o FSAR
- o IAP letters March 29, 1985 - General Issues Summary
April 23, 1985 - Review Issues List Transmittal
- o SER-10, -11

SUMMARY AND RECOMMENDATIONS

This Action Plan, as currently written, will satisfy the NRC's concerns regarding piping and supports provided that the following comments and recommendations are incorporated.

This action plan is highly dependent on the Stone & Webster project procedures CPPP-5, CPPP-6 and CPPP-7. Compliance with licensing commitments must be inherent in these procedures. Due to their importance, these procedures must be a part of (or appended to) this action plan.

More information is required regarding the process of verification for the small bore piping. Paragraph 2.0 simply states that "small bore piping and supports will be verified on a sampling basis." The only other place in this plan that small bore piping is mentioned is in Attachment 2 paragraph B where it says "Reanalysis of small bore (2" and under) piping and supports on a sampling basis to verify adequacy." This represents a major portion of the design effort in any nuclear plant. More details should be provided in the plan. Examples of further information that would be appropriate include:

1. The basis for sampling. That is what are the samples and how will they be defined?

Discipline Specific Action Plan
Item No. IX Rev. 0
(continued)

2. What will be done with the samples when they are defined? Will the samples be re-analyzed using S&W procedures or will the samples be reviewed, etc.?
3. What is the acceptance criteria to be used?

There are a number of external issues associated with piping and supports. Apparently, due to the major rework in the area by Stone and Webster, Issue Specific Action Plans will not be generated. It is understood in the plan, paragraph 4.2.1.1 that the issues will be identified, reviewed, evaluated and tracked by the Third Party Review. The technique to accomplish this should be documented.

In the RIL for pipe supports contained in the CYGNA letter of April 23, 1985, several items are identified which are not covered by the Stone and Webster reanalysis. These items should be addressed in this DSAP or in a separate ISAP. These items are:

3. Richmond Insert Allowables
8. Richmond Insert Allowable Spacing
9. Embedment Attachment Spacing
10. Thru-Bolts and Concrete Acceptability

Even though an entire reanalysis is being performed on the large-bore piping and pipe supports, root cause and generic implications must still be obtained since it may affect other disciplines. Also, root cause and generic implications must be looked at for the small bore to determine if a sampling of the small-bore lines will be sufficient.

The major area of concern with the reanalysis portion of this DSAP is that the details required for review are contained in procedures that are not included in the Plan. Since criteria for the reanalysis effort is not specifically addressed it will be necessary to review these procedures in detail prior to determining adequacy of the approach. Further, concerns have been raised related to support/piping interdependence. These range from the ability to properly model the support in the piping analysis so that the piping response is representative, to the determination of representative loading in uniquely designed support structures. Since these issues are not representative of standard industry practice the DSAP (or the referenced procedures) should specifically address the techniques to be used in resolving them. It appears that the adequacy of supports to comply with licensing commitments will be

Discipline Specific Action Plan
Item No. IX Rev. 0
(continued)

demonstrated by reviewing existing analyses rather than performing a reanalysis. If this is true a more detailed description of the approach to be used, criteria to be applied and extent of the review is required.

COMMENTS

- **Page 1, Section 3.0, 2nd paragraph**
What is the basis of the no safety significant deficiency statement.
- **Page 2, Section 4.2, last sentence**
Details must be included in the plan as to how this will be accomplished.
- **Page 4, Section 4.2.1.3**
It states that procedures will be reviewed to assure "Resolution of externally identified issues." Which Stone and Webster procedures will address this? The cumulative effect of all identified issues (paragraph 3.0) could more readily be assessed with ISAP's.
- **Pages 4 and 5, at bottom, Piping Analysis and Pipe Support Design Paragraphs**
Why the difference in words after "to ensure" in these two paragraphs? For the Pipe Support Design, if it is only functionality, what is the criteria to be used to determine this? Compliance with licensing commitments should be explicit and consistent in both paragraphs.
- **Page 6, Section 1.0, 2nd paragraph**
Is this the same "Deviation" used for the Plan or is this just "concerns encountered"? If this is "concerns encountered", we would recommend choice of another word in lieu of "deviations".
- **Page 6, Sections 5.1 and 5.1**
In the first paragraph 5.1, the last sentence should describe third party organization. (Attachment 1 shows SWEC organization).

Discipline Specific Action Plan
Item No. IX Rev. 0
(continued)

In the second paragraph 5.1, Attachment 1 should be referenced.

- **Page 8, Attachment 2, Section A, 4th paragraph**

Is this overview the third party overview?

- **Page 8, Attachment 2, Section B, first paragraph**

What does "qualify" mean? Is S&W the responsible design agent?

- **Page 8, Attachment 2, Section B, second hyphen**

It should state "100% of the large-bore supports including supports for Class 1 systems not designed by Westinghouse."

What about the interface with Westinghouse designed/analyzed piping?

- **Page 8, Attachment 2, Section B, third hyphen**

The size of the small-bore sample should be given.

- **Page 9, Attachment 2, Section C.6**

It should read ASME Section XI

- **Pages 9, 10, Attachment 2, D.1.a**

The "Procedures" should be a part of this plan since the plan is so heavily dependent upon them.

- **Page 11, Attachment 2, Section D.1.c**

Support problems such as Richmond inserts and wall-to-wall supports are listed as having no effect on the piping analysis. However, in order to resolve these problems, the supports may have to be removed or deleted, which could effect the piping analysis.

- **Page 11, Attachment 2, D.2.**

Approval by the NRC staff for the use of Code Case N-411 normally includes additional requirements which must be satisfied. Procedures must be developed to address these requirements.

Discipline Specific Action Plan
Item No. IX Rev. 0
(concluded) -

- **Page 11, Attachment 2, Section D.3**

The sample size and sample composition should be listed for the verification of as-built information.

- **Page 13, Attachment 2, Section E**

The report should also cover pipe support reanalysis small-bore piping, and address all appropriate external concerns.

**Discipline-Specific Action Plan
Item No. X Rev. 0**

TITLE MECHANICAL SYSTEMS AND COMPONENTS DISCIPLINE SPECIFIC ACTION PLAN

INTRODUCTION

The Action Plan for the mechanical systems and components discipline is Issue responsive and Self-Initiated. The self-initiated review encompasses the Auxiliary Feedwater System (AFW). The action specific review includes the IAP concern regarding radiation monitor control function changes.

The Independent Assessment Program (IAP) identified five specific concerns in the Mechanical Systems and Components area which carried implications of a generic nature. These concerns are summarized as follows:

- (a) CCW System Maximum Temperature - Discrepancies were noted between the Westinghouse specified maximum CCW system temperature and those stated in the FSAR, Gibbs and Hill calculations and TUGCO documentation. This discrepancy occurred as a result of revision to system design and operating data. Cygna recommended that all affected system components be reviewed to ensure that they are qualified to new operating conditions.
- (b) Class 5 Piping - A concern was raised regarding the requirement for functional acceptability of Class 5 piping during a seismic event. Cygna recommended that a review be performed of other Class 5 systems where functionality is required to insure their acceptability.
- (c) Single Failure - Concern was expressed that failure to close of a single temperature controlled isolation valve, subsequent to failure of the reactor coolant pump thermal barrier, could result in release of reactor coolant outside containment. This raised concerns for the potential of a common mode failure in systems with similar attributes.
- (d) CCW Surge Tank Isolation on High Radiation Signal - Design documents for the CCW system required that the surge tank be isolated by closing the vent valve on receipt of a high radiation signal. Removal of this control function from the system radiation monitors did not address the radiation release effects of the vent remaining open. Although calculations

Discipline-Specific Action Plan

Item No. X Rev. 0

(continued)

verified that the release was within 10CFR100 limits no generic review was conducted of other radiation monitor control function changes.

- (e) Fire Doors - The IAP noted the installation of a non-qualified fire door. Cygna requested assurances that as-built Appendix R modifications are in compliance with specification requirements.

SUMMARY AND RECOMMENDATIONS

The action specific plan addresses radiation monitoring changes as described in Paragraph 4.2 and is intended to respond to the IAP concern through a generic review of other radiation monitoring control functions which have been deleted or changed. However the plan does not identify, specifically, the scope and extent of this review. The second paragraph of 4.2 indicates that specifics such as numbers, types and location of monitors, FSAR commitments and regulatory requirements will be identified during implementation of the action plan. This information should be submitted for review prior to initiation of this DSAP.

The generic concerns expressed by the IAP are to be addressed through the self-initiated review described in Paragraph 4.1 of the Program Plan. Additional external source issues relevant to Mechanical Systems and Components are also to be considered in this generic review. Finally, the potential for unidentified design deficiencies are to be addressed under this program.

The implementation of this review is to be conducted on the Auxiliary Feedwater System considered by the licensee to be representative of design areas and processes of other plant safety-related systems, as well. This determination was made based on the Scope Development Process (Appendix A, Attachment 5) which involved a systematic review of IDVP's and IDI's at other nuclear power plants.

Although IDVP's and IDI's conducted at other nuclear facilities provide some input, the situation at CPSES has been sufficiently reviewed and discussed to indicate the breadth and depth required that, when aggregated with previous reviews, all of the significant design areas and disciplines will have been covered. The review

Discipline-Specific Action Plan
Item No. X Rev. 0
(concluded)

should be based on the specific concerns at CPSES and the breadth and depth, when combined with the ISAP's and other DSAP's, provides reasonable assurance that the design is acceptable.

The DSAP proposes that the basis for acceptability in most review areas be keyed to the determination of "safety significance." However, the criteria for establishing safety significances are not specifically defined in the plan. By definition in Appendix E, safety significance involves loss of capability to perform the intended function. In the specific review areas, the Plan indicates that corrective action will be taken only if loss of function or the potential for loss of function is determined. This seems to imply that violation of requirements other than functional, such as Code stress limits, may be acceptable without corrective action. Justification for this approach should be discussed further.

The review scope as described in 4.1.5 of the DSAP is considered to address the IAP concerns of CCW system maximum temperature, Class 5 Piping and Single Failure in addition to providing a vehicle for addressing additional external issues which may arise and for providing an effective discovery process for potential unidentified issues.

It is stated in 3.0 of the DSAP that the IAP concern regarding fire doors is addressed in the QA/QC Construction Adequacy Plan.

COMMENTS

None

APPENDIX D
Rev. 0

TITLE CPRT SAMPLING APPROACH, APPLICATIONS, AND GUIDELINES

INTRODUCTION

The approach presented in this Appendix to the program plan will be used to extract a statistical sample for exploratory evaluations in the design and construction adequacy of CPSES Units 1 and 2.

SUMMARY AND RECOMMENDATIONS

The overall sampling methodology is sound and is based upon acceptable statistical theory. No specific plans. However, only general guidelines are provided. The confidence levels, percentage detected, and tolerance limits are merely suggested with no firm minimums (or maximums) provided. This approach therefore allows for flexibility in carrying out a sampling plan, and can lead to inconsistencies in the aggregated results for both the construction and the design processes.

COMMENTS

- **Page 1, last paragraph**

"CPRT will generally apply a 95/5 criterion,...." There should be a defined minimum and maximum limit for the program for confidence levels and percentage detected.

- **Page 2, last section**

No definitive plan or commitment to a plan, i.e., "guidelines", "assist", "outline", "apply to most". Plan is not adequately defined.

- **Page 3, 1st paragraph**

"are governed by" - words have connotation contrary to previous comment.

- **Attachment 1, page 4**

Assumption of infinite population size is valid. Although population is actually finite, it can be assumed to be made infinite under the same given conditions.

APPENDIX D
Rev. 0
(continued)

- **Attachment 2, page 6, 2nd paragraph**

Plan does not address how to use tolerance limits in conjunction with sampling plans. Are they to be used as stand-alone criteria or as accept/reject criteria for a sampling plan?

No tolerance limits or confidence levels are established. Guide implies use of 95% confidence, but no tolerance limit.

- **Attachment 2, page 6, 4th paragraph**

Statistical tests should determine whether the population distribution can be assumed normal or log-normal with a fixed confidence level.

The sample size of 50 is not clear as to whether this is a requirement or a guideline.

- **Table 2, page 7**

Table provided does not give enough information for use. Are all tables in Appendix to be used as guides? Are we to go to other tables for other confidence levels? Proper explanation in this regard is needed.

Table actually gives figures for one-sided tolerance.

$$\text{Limit} = X + KS \text{ or } X - KS, \text{ not } X \pm KS.$$

This might be taken to mean that two-sided limits could be used.

- **Attachment 3, page 8**

Guideline only or nonmandatory?

- **Table 3, page 9**

No comment.

- **Attachment 4, page 10, 2nd paragraph**

No determination of where to stop sampling and inspect entire population.

Are all deficiencies found dispositioned?

APPENDIX D
Rev. 0
(concluded)

- **Attachment 4, page 11**

When stratum is separated from the general population, the sampling of the general population should continue until the required sample size is obtained.

When the stratum is left in the general population, the required sample size for both stratum and general population must be obtained.

**APPENDIX F
Rev. 0**

TITLE CPRT INTERFACES

INTRODUCTION

This Appendix deals with compiling the descriptions of all interfaces established among the parties participating in the CPRT Program. Attachment 7 of Appendix A was reviewed along with this Appendix to determine if this appendix is consistent with the interfaces described in Appendix A. Appendices B and C were reviewed for detailed descriptions of interfacing requirements.

SUMMARY AND RECOMMENDATIONS

This Appendix is under development with an anticipated date of completion August 1, 1985. The objectives of this Appendix will satisfy the NRC's concern regarding comprehensive descriptions of interfaces and compilation of these descriptions in a single summary provided the following recommendations and comments are incorporated.

One of the objectives is for a more comprehensive description of interfaces among the parties involved in the plan. However, there is no interface requirements included in the DSAP's or ISAP's. Before this Appendix can be completed, the interface requirement for these items must be established. Attachment 1 to this Appendix is representative of the format and level of detail anticipated. However, this is only a copy of what is included in Appendix A. It is not more comprehensive as is stated as an objective of this Appendix.

COMMENTS

- **Pages 2 through 5**

There should be details describing what action should be taken for items indicated Information Only, Review and Comment, Action By and Coordination of Results.

- **Page 2 of 5, first item**

The first item on page 2 is identified as Action Plan Results Report, while the first item listed on page 56 of Appendix A is ISAP Results Report. There is a lack of consistency.

APPENDIX E
Rev. 0

TITLE PROCEDURE FOR THE CLASSIFICATION, EVALUATION, AND TRACKING OF
SPECIFIC DESIGN OR CONSTRUCTION DISCREPANCIES IDENTIFIED BY
THE CPRT

INTRODUCTION

This Appendix defines criteria for classifying discrepancies and establishes a process for evaluating, documenting and tracking discrepancies.

SUMMARY AND RECOMMENDATIONS

The Action Plan, as defined, separates the design and construction evaluation and tracking process unless discrepancies are identified. This separation will not cover the interface activities between design and construction and therefore programmatic root cause or generic implications at the interface level may not be adequately addressed during the implementation of the Plan.

COMMENTS

- Page 4, Section C(b)(3)
"Appropriate Correction action...has been identified." Who has responsibility for this? And how will it be implemented?
- Page 5, Section C(c)(2)
Same comments as above.

APPENDIX F
Rev. 0
(concluded)

- **Page 4 of 5, third item**

This page indicates that the item "Selection of design related attributes" requires review and comment, while page 57 of Appendix 54 requires Action by DAP. Again, there is a lack of consistency.