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 50-362 San Onofre Nuclear Station, Unit 3, Southern California
 AUTH. NAME: AUTHOR AFFILIATION
 DIETCH, R. Southern California Edison Co.
 RECIP. NAME: RECIPIENT AFFILIATION
 DENION, H. R. Office of Nuclear Reactor Regulation, Director
 EISENHUT, D. G. Division of Licensing

DOCKET #
 05000361
 05000362

SUBJECT: Forwards Potential Finding Repts 0020, 0021 & 0025 issued to:
 Bechtel Power Co & 0027-0030 issued to C-E by SA Co.

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Southern California Edison Company

SEE

P. O. BOX 800

2244 WALNUT GROVE AVENUE

ROSEMEAD, CALIFORNIA 91770

ROBERT DIETCH

VICE PRESIDENT

TELEPHONE

213-572-4144

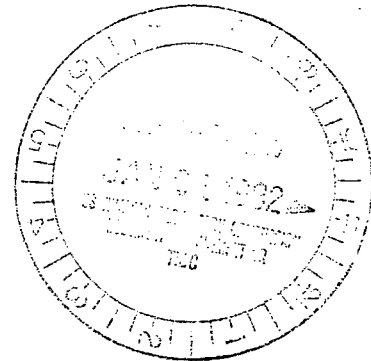
January 20, 1982

Mr. Harold R. Denton,
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. Darrell G. Eisenhut

Dear Mr. Denton:

Subject: Docket Nos. 50-361 and 50-362
San Onofre Nuclear Generating Station
Units 2 and 3



Enclosed are seven copies each of Potential Finding Reports Nos. 0020, 0021 and 0025 issued to Bechtel Power Company, as well as Nos. 0027 through 0030 issued to Combustion Engineering by General Atomic Company. These reports reflect the reviewer's initial opinion and have not been verified for validity and accuracy by the original design organization.

If you have any questions regarding this matter, please call me.

Very truly yours,

Robert Dietch

cc: NRC Region V
R. H. Engelken (with enclosure)

*Boo's
1/1*

8201220256 820120
PDR ADOCK 05000341
A PDR

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TORREY PINES TECHNOLOGY

P.O. Box 81608
San Diego, California 92138
Telephone: (714) 435-2654

Rcd on Telex 1/19/82
@ 5:15 P.M.

GEORGE L. WESSMAN
Director

January 19, 1982

Mr. D. J. Fogarty
Executive Vice President
Southern California Edison
P. O. Box 800
Rosemead, CA 91770

Dear Mr. Fogarty:

Attached are Potential Finding Reports 2408-PFR-0020, 0021 and 0025.

Sincerely,

George L. Wessman
George L. Wessman
Project Manager

Enclosures

cc: J. Hempe - Bechtel
J. Adrian - SCE

THIS POTENTIAL FINDING IS
UNDER REVIEW BY ORIGINAL
DESIGN ORGANIZATION FOR
VALIDITY AND ACCURACY.

POTENTIAL FINDING REPORT
SONGS 2&3 SEISMIC DESIGN VERIFICATION

PFR NO. 2408-PFR-0020

REVISION -

PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop 1A, Piping Stress Analysis Package PSG-78. Calculation Sheets for Node 167, Tag No. S2-S1-059-H308.

REQUIREMENT REFERENCE DOCUMENTS:

Specification S023-409-2 "Nuclear Service Pipe Support, Hangers and Accessories for SONGS 2 and 3" Certified 4/24/74, p. 4F-9

BASIC REQUIREMENT:

Allowable stresses under DBE for structural steel at standard temperature shall be 0.9 times the minimum guaranteed yield stresses listed in AISC Spec. 1969.

DESCRIPTION OF POTENTIAL FINDING:

Sheet 3 of the calculation uses $0.6 F_y \times 0.9 = 19.14$ KSI for allowable bending stress. Sheet 4 uses 13.6 KSI for the allowable shearing stress in the weld. (Material and weld electrode not identified).

PREPARED BY: T.T. Lee

DATE: 1-18-82

REJECTION OF GA TASK LEADER COMMENTS BY: _____

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REVIEW BY GA TASK LEADER

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☒ AGREE PF IS VALID

BY FTZ/10/2

DATE 1/15/82

☐ REQUEST RE-REVIEW

BY _____

DATE _____

☐ DISAGREE

BY _____

DATE _____

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DATE: _____

POTENTIAL FINDING REPORT
SONGS 2&3 SEISMIC DESIGN VERIFICATION

PFR NO. 4575-17A-0021
REVISION - 0021

PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop 1A, Piping Stress Analysis package PSG-78. Calculation sheets for Node 167. Tag No. S2-SL-059-H008.

REQUIREMENT REFERENCE DOCUMENTS:

Specification S023-409-2, "Nuclear Service, Pipe Support Hangers and Accessories for SONGS 2 & 3", Certified 4/24/74, p. 4F-9.

BASIC REQUIREMENT: Structural Design per AISC Specification. (Feb. 12, 1969)

DESCRIPTION OF POTENTIAL FINDING:

Calculation sheet 4 uses 13.6 KSI for the allowable shearing stress in the weld. In AISC Spec. 1969 the corresponding allowable is 18.0 KSI.

PREPARED BY: T.T. Lee

DATE: 1-18-82

REJECTION OF GA TASK LEADER COMMENTS BY: _____

DATE: _____

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DATE: _____

REVIEW BY GA TASK LEADER

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☒ AGREE PF IS VALID

BY R. J. Lee

DATE 1/18/82

☐ REQUEST RE-REVIEW

BY _____

DATE _____

☐ DISAGREE

BY _____

DATE _____

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POTENTIAL FINDING REPORT
SONGS 2&3 SEISMIC DESIGN VERIFICATION

PFR NO. 2408-PFR-0025

REVISION -

PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop 1A, Piping Stress Analysis Package PSG-78. Calculation Sheets for Node 167. Tag No. S2-S1-059-H008

REQUIREMENT REFERENCE DOCUMENTS:

Not Applicable

BASIC REQUIREMENT:

Not Applicable

DESCRIPTION OF POTENTIAL FINDING:

The note on Sheet 1, "Margin of safety in as-built calculations is adequate to accommodate increased loads. Include DCN's 1, 2, 3, 4, 5, & 6" is not substantiated. (DCN5 gives modified dimensions.) Sheet 3 shows an 1% safety margin based on the original dimension and load magnitude. The increase in the maximum horizontal load shown in Sheet 1 is 32%. No discussion on the effect of changed dimension was provided.

PREPARED BY: T. T. Lee DATE: 1/18/82
REJECTION OF GA TASK LEADER COMMENTS BY: DATE: _____
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REVIEW BY GA TASK LEADER

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DATE

☐ REQUEST RE-REVIEW

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☐ DISAGREE

BY

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☐ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY:

DATE:



TORREY PINES TECHNOLOGY

P.O. Box 81528
San Diego, California 92138
Telephone: (714) 455-2654

*Rec'd on Telex 1/19/82
c 5:15 P.M.*

GEORGE L. WESSMAN
Director

January 19, 1982

Mr. D. J. Fogarty
Executive Vice President
Southern California Edison
P. O. Box 800
Rosemead, CA 91770

Dear Mr. Fogarty:

Attached are Potential Finding Reports 2408-PFR-0027 through
2408-PFR-0030.

Sincerely,

George Lj

George L. Wessman
Project Manager

Enclosures

cc: V. Hall - CE
J. Adrian - SCE

THIS POTENTIAL FINDING IS
UNDER REVIEW BY ORIGINAL
DESIGN ORGANIZATION FOR
VALIDITY AND ACCURACY.

POTENTIAL FINDING REPORT
SONGS 2&3 SEISMIC DESIGN VERIFICATION

PFR NO. 2408-PFR-0027

REVISION _____

PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Engineered Safety Features Actuation System Auxiliary Relay Cabinet (2L-34)

REQUIREMENT REFERENCE DOCUMENTS: General Engineering Specification for Engineered Safety Features Actuation System Auxiliary Relay Cabinet, Specification No. 00000-ICE-002, Rev. 04. July 14, 1975, Combustion Engineering, Inc.

BASIC REQUIREMENT: Paragraph 3.2.2.2 of IEEE Standard 344-1971 requires that devices being tested should demonstrate their ability to perform their intended function and sufficient monitoring equipment should be provided to evaluate performance before, during and after the (seismic) test.

DESCRIPTION OF POTENTIAL FINDING: The specification fails to require functional testing of the in-cabinet devices during seismic excitation. It fails to specify whether device contact chatter is acceptable and, if acceptable to specify the maximum acceptable time duration of contact chatter.

PREPARED BY: S. Rodkha

DATE: 1/18/82

REJECTION OF GA TASK LEADER COMMENTS BY: _____

DATE: _____

REJECTION OF ORIGINAL DESIGN ORG. COMMENTS BY: _____

DATE: _____

REVIEW BY GA TASK LEADER

COMMENTS

☐ AGREE PFR IS VALID

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☐ REQUEST RE-REVIEW

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☐ DISAGREE

BY

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☐ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: _____

DATE: _____

POTENTIAL FINDING REPORT
SONGS 2&3 SEISMIC DESIGN VERIFICATION

PFR NO. 2402-PFR-0028

REVISION -

PREPARATION: BY GA INITIATOR

AFFECTED ITEMS: Engineered Safety Features Actuation System Auxiliary Relay Cabinet (2L-34)

REQUIREMENT REFERENCE DOCUMENTS: General Engineering Specification for Engineered Safety Features Actuation System Auxiliary Relay Cabinet, Specification No. 00000 -ICE-3002, Rev. 04, July 14, 1975, Combustion Engineering, Inc.

BASIC REQUIREMENT: Paragraph 5.11.1 of the specification states in part that the equipment will be considered Class I seismically qualified if certain requirements are met when the equipment has been subjected to motions of the floor to which the equipment will be mounted.

DESCRIPTION OF POTENTIAL FINDING: The specification does not give the specific RRS to be used nor does it give any references as to where the specific RRS is to be found, although several sub-paragraphs of paragraph 5.11.2 refer in a general way to RRS and TRS and to the need for the TRS to envelope the RRS

PREPARED BY: S. Rodkey DATE: 1-18-82

REJECTION OF GA TASK LEADER COMMENTS BY:

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BY me Figuer

DATE 1/17/82

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DATE _____

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POTENTIAL FINDING REPORT
SONGS 2&3 SEISMIC DESIGN VERIFICATION

PFR NO. 24CE-PFP-0029

REVISION _____

PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Engineered Safety Features Actuation System Auxiliary Relay Cabinet (2L-34)

REQUIREMENT REFERENCE DOCUMENTS: General Engineering Specification for Engineered Safety features Actuation System Auxiliary Relay Cabinet, Specification No 00000-ICE-2002, Rev. 04, July 14, 1975, Combustion Engineering, Inc.

BASIC REQUIREMENT:

Paragraph 5.11.3 of the Specification states in part that functional equipment shall be tested in accordance with Section 5.7.1.

DESCRIPTION OF POTENTIAL FINDING:

Section 5.7.1 does not exist as a part of the specification.

PREPARED BY: Stan Rodkin

DATE 1-18-82

REJECTION OF GA TASK LEADER COMMENTS BY: _____

DATE: _____

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DATE: _____

REVIEW BY GA TASK LEADER

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DATE 1/19/82

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DATE _____

☐ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: _____

DATE: _____

POTENTIAL FINDING REPORT
SONGS 2&3 SEISMIC DESIGN VERIFICATION

PFR NO. 2402-PFR-0030

REVISION -

PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Engineered Safety Features Actuation System Auxiliary Relay Cabinet (2L-34)

REQUIREMENT REFERENCE DOCUMENTS: General Engineering Specification for Engineered Safety Features Actuation System Auxiliary Relay Cabinet, Specification No. 00000 -ICE -3002, Rev. 04, July 14, 1975, Combustion Engineering, Inc.

BASIC REQUIREMENT: Paragraph 5.11.2.4 of the specification requires that no major structural resonances below 10 HZ. shall occur. The same paragraph requires that construction of the cabinet shall preclude amplification factors that could result in failure of equipment mounted therein.

DESCRIPTION OF POTENTIAL FINDING: The specification does not require the vendor to consider the anchorage details (embedments) supplied by Bechtel in his analysis or in his test. Consideration of those details might result in amplification factors and natural frequencies outside the specified limits.

PREPARED BY: S. Backin DATE: 1-18-82

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REVIEW BY GA TASK LEADER

COMMENTS

☒ AGREE PFR IS VALID

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DATE 1/19/82

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DATE: _____