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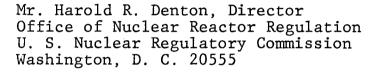
#### Southern California Edison Company

P. O. BOX 800 2244 WALNUT GROVE AVENUE ROSEMEAD, CALIFORNIA 91770

VICE PRESIDENT

#### January 19, 1982

TELEPHONE 213-572-4144



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. 0014, 0015, 0016, 0017, 0018, 0019 and 0026 issued to Bechtel Power Corporation 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.

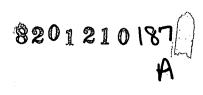
If you have any questions regarding this matter, please call me.

Very truly yours,

Robert Sietch /

200

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



RECEIVED JAN 2 0 1982



Director - -

## **TORREY PINES TECHNOLOGY**

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P.O. Box 81608 San Diego, California 92138 Telephone: (714) 455-2654

Rc'd.on Telex 1/19/02 @11000 A.M

January 19, 1982 . . .

CEORGE LIWESSMAN

Hr. B. J. Fogarty Executive Vice President SOUTHERN CALIFORNIA EDISON P. 0. Box 800 Rosemead, California 91770

Dear Mr. Fogarty:

Attached are Potential Einding Reports 2408-PFR-0014, 0018, 0019 and 0026.

Sincerely,

George L. Wessman

Project Manager

#### Attachments

cc: J. Adrian - SCE J. Hende BPC

and the second second

**POTENTIAL FINDING REPORT** 

PFR ND. 2408-PFR-0014

### REVISION SONGS 2&3 SEISMIC DESIGN VERIFICATION

## A. PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop 14, Piping Stress Analysis Package PSG-78 Node 117, Calculation Tag S2-S1-043-H-020

REQUIREMENT REFERENCE DOCUMENTS:

FINDING Piping Stress Analysis Package 5-78, M1204-043

**BASIC REQUIREMENT:** 

Calculation use latest design load

DESCRIPTION\_OF FINDING:

The load used in design calcu for plan node (+69500/ Sheet 63 of S-78 gi a load for node \117 (+38736/-38736) \off

Saleval Yoglu PREPARED BY: 18/82 DER COMMENTS BY ORG. COMMENTS BY

ALDITYAND **REVIEW BY GA TASK LEA** 

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C REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY:

18/82

COMMENTS

DATE:

DATE:

PFR NO. 2408 PFR-0018

REVISION

## POTENTIAL FINDING REPORT SONGS 2&3 SEISMIC DESIGN VERIFICATION

### A. PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop 1A, Piping Stress Analysis Package PSG-78, Node 146 (Incorrectly shown as Node 147, Ref. 2408-PFR-0006) No. 52-51-059-H-009.

REQUIREMENT REFERENCE DOCUMENTS:

Specification S023-409-2, Nuclear Service Pipe Supports, Hangers and Accessories for San Onofre Nuclear Generating Station, Units 2 and 3, Page 4P-9 (4/24/24).

BASIC REQUIREMENT: Str

Structural Steel Design per AISC Spec. (Feb. 12, 1969).

DESCRIPTION OF POTENTIAL FINDING: Revised Calculation P450-1.109 9.100. Sht. 1 uses weld allowable stress of 13.6 KSI, which is the allowable in AIGO Spec (1963) for BGOXX electrode. The weld allowable str in AISC (1969) is 18 KSI for EGOXX electrode. The calculation uses weld allowable str for 2 different electrodes without calling out the electrodes.

. Zimmer PREPARED BY REJECTION OF GA TASK CEADER COMMENTS BY: REJECTION OF ORIGINAL DESIGN ORG. COMMENTS BY: DATE: 8. REVIEW BY GA TASK LEADER ALIDITY P COMMENTS <u>E/i</u>z AGREE PF IS VALID DATE REQUEST RE-REVIEW RY DATE **D** DISAGREE BY DATE

REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY:.

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## A. PREPARATION BY GA INITIATOR

AFFECTED ITENS: Safety Injection Line to BEactor Coolant Loop IA, Piping Stress Anal Package PSG-78, Node 146 (Incorrectly shown as node No. 147, Ref. 2408-PFR-0006), TEBLAREMENT REFERENCE BOCUMENTS

Specification SO23-409-2, Buclear Service Pipe Supports, Hangers and Accessories San Onofre Nuclear Generating Station, Units 2 and 3, Page 44 9/1(4-24-74).

BASIC REQUIREMENT:

Allowable stress under DBE loading for structural steel was the minimum guaranteed yield stresses listed in the AISC Spec. (Feb.

svised calculation P450-1.109 - 9,100, Sht. 1 DESCRIPTION OF POTENTIAL FINDING: uses bending allowable = 19744 SI (0.6Fy x 0.9) and weld shear allowable stresses are not equal to 0.9 x Ey per the besic requirement. of 13.6 KSI and 21.0 KSI which

PREPARED BY: DER COMMENTE B REJECTION OF GAN REJECTION OF DESIGN ORG. COMMENTS BY

**REVIEW BY GA TASK LEA** 

COMMENTS

/16/82

DATE 1/18/82 AGREE PF IS VALID REQUEST RE-REVIEW 8Y DATE **D**ISAGREE BY DATE \_ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY:

DATE:

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PFR NO. 2408-PFR-0026

REVISION

# SONGS 203 SEISMIC DESIGN VERIFICATION

#### A. PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop 1A, Piping Stress Analy Package PSG-78, Node 146 (Incorrectly shown as Node 147, Bef. 240E-PFR-0006) Tag. No. \$2-\$1+039-R-009 REQUIREMENT REFERENCE DOCUMENTS Specification S023-409-2, Nuclear Service Pipe Supports, Hangers and Accessories for San Onofre Nuclear Generating Station, Units 2 and 3 Section **BASIC REQUIREMENT:** Materials used in the support should be called out of drawings and boduments. DESCRIPTION OF POTENT Calculations and drawings do not be nor weld electrode used A. Zimmer 18/82 PREPARED BY: \_ REJECTION OF GA TASK ADER COMMENTS BY DATE: REJECTION OF ORIGIN DESIGN ORG. COUNTENTS BY: DATE: 8. REVIEW BY GA TASK LEADER COMMENTS AGREE PF IS VALID DATE C REQUEST RE-REVIEW BY DATE D DISAGREE **8**Y DATE C REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: DATE:



#### TORREY PINES TECHNOLOGY

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P.O. Box 81698 San Dingo, California 92138 Tulephone: (714) 455-2654

Reid, on Telero 1/18/82 5:00 P.M.

.....

GEORGE WESSMAN

January 18, 1982

Ar.D.J.Fogarty Southern California Edison P.O. Box 800 Rosemead, California 91770

Dear Hr. Fogarty:

Attached are Potential Finding Reports 2408-PFR-0015 through 2408-PFR-0017.

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Devision of General Alertic Contesta

Sincerely,

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Deoroge / j

George L. Wessman Project Manager

Enclosures

Adrian - SCE

PFR ND.2408-PFR-0015

REVISION -

BATE:

DATE:

## POTENTIAL FINDING REPORT SONGS 2&3 SEISMIC DESIGN VERIFICATION

#### A. PREPARATION BY GA INITIATOR

AFFECTED ITEMS: The engineered safety features system control panel (panel 2CRS7) of the L&C system.

REQUIREMENT REFERENCE DOCUMENTS: The Bechtel Power Corporation Specification for Control Room and Field Mounted Panels, specification number 5023-502-3 with Addenda I. II and III.

BASIC REQUIREMENT: That all natural frequencies be preater than 10 HZ horizontally and 15 HZ vertically ( Para. 4.6.5.3 of specification and Addendum 1). Acceleration response when subjected to the DBE control kown floor response spectrum shall not exceed 3 "g" in any direction (para: 4.6.5.4 of Addendum 1).

DESCRIPTION OF POTENTIAL FINEING. The specification fails to require that the internation panel wiring or the connecting wiring be simulated, accounted for or otherwise considered during seismic qualification testing of panels. Inaccurate determination mode shape, acceleration levels and natural frequency may have occurred if the wiring was not considered.

REJECTION OF SA LASK LEADER COSTUENTS BY

B. REVIEW BY GA TASK LEADE

COMMENTS

DATE \_\_\_\_ **D** AGREE PF IS VALID REQUEST RE-REVIEW DATE RY DISAGREE DATE\_

REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY:

PFR NO. <u>2408-</u>PFR-GC REVISION \_\_\_\_\_

DATE: .

## POTENTIAL FINDING REPORT R SONGS 2&3 SEISMIC DESIGN VERIFICATION

#### A. PREPARATION BY GA INITIATOR

AFFECTED ITEMS: The engineered safety features system control panel (Panel 2CR57) the 16C System.

REQUIREMENT REFERENCE DOCUMENTS: The Bechtel Power Corporation Specification for control room and field mounted panels specification number S023-902-5 with Addenda I II, and III.

BASIC REQUIREMENT: That the acceleration level at device mounting points on the panot exceed 3"C" when the panel is exposed to the control room floor (30' elevation) DBE response spectra (Section 4.6.5.4 of Addendum I to the specification).

DESCRIPTION OF POTENTIAL FINDING: The specification fails to require the vendor to consider the anchorage details designed by Bechtel (the embedments) is his analysi his test of panels. Consideration of such details might result in catural frequence and mode shapes which would cause the maximum specified "G" level at device mounting locations to be exceeded during seismic excitation

PREPARED BY

1 AN

B. REVIEW BY GA TASK LEADE

COMMENTS

Tel 1 \_ DATE . AGREE PF IS VALID DATE REQUEST RE-REVIEW RY DATE . D DISAGREE DATE: C REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: ..

1 2 PFR NO. \_2408-PFR-003 POTENTIAL FINDING REPORT REVISION \_\_\_\_ SONGS 2&3 SEISMIC DESIGN VERIFICATION A. PREPARATION BY GA INITIATOR AFFECTED ITEMS: The engineered safety features system control panel (panel 2CR57) of State and a state REQUIREMENT REFERENCE DOCUMENTS: The Bechtel Power Corporation specification for the I&C System. control room and field mounted panels, specification number S023-50235 with Addenda I, II, and III. That the acceleration level at device mounting points on the part not exceed 3 "G" in any direction when the ganel is exposed to the control room floor (30' elevation) DBE response spectra (section 4.6.5.4 of Addention I to the specifica DESCRIPTION OF POTENTIAL FINO NG: The specification fails to require the vendor to consider the dynamic interaction of cabinets arranged in the specific manner of the San Onofre Control Room cabinets. Such dynamic interaction may produce mode shapes resulting in excessive g levels during seismic excitation. 1-17-82 DATE: . PREPARED BY: VASK LEADER CONFILMENTS BY REJECTION OF GA REJECTION OF DRIGINAL DESIGN ORE. COMMENTS BY DATE: COMMENTS 8. REVIEW BY GA TASKL DATE 1/16/82 AGREE PF IS VALIO DATE . D REQUEST RE-REVIEW BY OATE \_\_\_\_ **D** DISAGREE 8Y DATE: \_\_ C REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: