# REGULATORY FORMATION DISTRIBUTION SY EM (RID

ACCESSION NBR:8202020292 DOC.DATE: 82/01/29 NOTARIZED: NO DOCKET # FACTE:50-361 San Onofre Nuclear Station, Unit 2, Southern Californ 05000361 50-362 San Onofre Nuclear Station, Unit 3, Southern Californ 05000362

AUTH.NAME AUTHOR AFFILIATION

DIETCH,R. Southern Galifornia Edison Co.

RECIPIENT AFFILIATION EISENHUT, D.G. Division of Licensing

SUBJECT: Forwards processed & classified potential finding repts (PFR). Repts were processed by GA Co. Addl PFRs will be transmitted during wk of 820201.

DISTRIBUTION CODE: BOO1S COPIES RECEIVED:LTR / ENCL / SIZE: 54
TITLE: PSAR/FSAR AMDTS and Related Correspondence

NOTES:L Chandler:all FSAR & ER amends.1 cy:J Hanchett(Region V). 05000361

D Scaletti:1 cy all envir info.

L Chandler: all FSAR & ER amends.1 cy:J Hanchett (Region V). 05000362

D Scaletti:1 cy all envir info.

	RECIPIENT		COPIE	ES	RECIPIENT		COP	1ES
	ID CODE/NAM	=	LTTR	ENCL	ID CODE/NAM	Ē	LTTR	ENCL
ACTION:	A/D LICENSNG		1	- 0	LIC BR #3 BC		1	0
	LIC BR #3 LA		1	· <b>0</b>	ROOD,H.	01	1	1
INTERNAL:	ELD		1	0	IE	06	3	- 3
	IE/DEP/EPD8	35	. 1	1	IE/DEP/EPLB	36	٠3	3
	MPA		1	· O	NRR/DE/CEB	11	1	1
	NRR/DE/EQB	13	3	. 3	NRR/DE/GB	28	· 5	2
•	NRR/DE/HGEB	30	2	2	NRR/DE/MEB	18	. 1	1
	NRR/DE/MTEB	17	1	1	NRR/DE/QAB	21	1	1
	NRR/DE/SAB	24	1	1	NRR/DE/SEB	25	1	1
	NRR/DHFS/HFE	340	1	1	NRR/DHFS/LQ8	32	. 1	1
·	NRR/DHFS/OLB	34	1	1	NRR/DHFS/PTRI	320	1	1
	NRR/DSI/AEB	26	1	1	NRR/DSI/ASB	27	1	1
	NRR/DSI/CPB	10	1	1	NRR/DSI/CSB	09	1	1
·	NRR/DSI/ETSB	12	1	1	NRR/DSI/ICSB	16	1	1
•	NRR/DSI/PSB	19	1	1	NRR/DSI/RAB	22	1	1
	NRR/DSI/RSB	23	1	1	NRR/DST/LGB	33	1	1
	REG FILE	04	1	1	,			•
EXTERNAL:		41	16	16	BNL (AMDTS ON	"Y.)	1	1
d: 	FEMA-REP DIV	39	1	1	LPDR	03	1	1
	NRC PDR	02	1	1	NSIC	05	1	1
THE COLUMN TWO IS NOT	NTIS		1	1				

M

64 63 ENCL

## Southern California Edison Company

P. O. BOX 800

2244 WALNUT GROVE AVENUE ROSEMEAD, CALIFORNIA 91770

ROBERT DIETCH VICE PRESIDENT

January 29, 1982

TELEPHONE 213-572-4144

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

U. S. Nuclear Regulatory Commission Washington, D.C. 20555

Gentlemen:

Docket Nos. 50-361 and 50-362 Subject:

San Onofre Nuclear Generating Station

Units 2 and 3



Enclosed are sixty-three (63) copies of the Potential Finding Reports (PFR) which have been processed and classified by General Atomic as follows:

	Observation		Observation
PFR-0004	Invalid	PFR-0025	Invalid
PFR-0005		PFR-0026	Invalid
PFR-0012	Invalid	PFR-0029	Invalid
PFR-0018	Invalid	PFR-0032	Invalid
PFR-0019	Invalid	PFR-0033	Invalid
PFR-0020	Invalid	PFR-0034	Finding
PFR-0021	Invalid	PFR-0039	
PFR-0022	Invalid		Invalid

We will transmit additional processed and classified PFRs to you during the latter part of the week of February 1, 1982.

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

Very truly yours,

NRC Region V, R. H. Engelken (w encl) ETECH, H. R. Fleck (w encl)

H. Rood (To be opened by addressee only, with

five copies of enclosure) «

8202020292 8201 PDR ADDCK 05000361

		PFR NO. 2408-PFR-0001
\$ ·	POTENTIAL FINDING REPORT SONGS 2&3 SEISMIC DESIGN VERIFICATIO	REVISION B N
	CONTROL DESCRIPTION OF THE PROPERTY OF THE PRO	
Α.	PREPARATION BY GA INITIATOR	•
	AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop Piping Stress Analysis Package PSG 82	1A
1	REQUIREMENT REFERENCE DOCUMENTS:	. 1
	P&I Diagram 40112-10 Computer runs Q45H25 and Q39H59	
	BASIC REQUIREMENT:	
Line	e 109-24"-C-LLO should be correctly identified in ISO Dwg. 1204-004-	-1 (Sh.50 PSG 82).
	DESCRIPTION OF POTENTIAL FINDING:	•
Q39H	Although the line 109-24"-C- LLO was correctly modeled in compute 159, the ISO Dwg. 1204-004-1 (Sh. 50 PSG 82) incorrectly identification No. 002-24"-C-LLO.	
		· · · · · · · · · · · · · · · · · · ·
	PREPARED BY: F. Lin The DATE: 1-18-82	·
	REJECTION OF GA TASK LEADER COMMENTS BY:	DATE:
₿.	REVIEW BY GA TASK LEADER COMMENTS	
	Agree with reviewer's dispose	i hon

Agree with reviewer's dispo of BAC's response to PF finition.

□ AGREE PF IS VALID	BY ME SUICE	DATE 1/19/8 ~	•
☐ REQUEST RE-REVIEW	BY	DATE	e e manage
□ DISAGREE	BY	DATE	•
☐ REVIEW OF ORIGINAL D	DESIGN ORGS. COMMENTS BY:		DATE:

(0010)

DEVICEON	В
REVISION	

<u> </u>			Paradition of Paradition S. Society. At 1987 & subsections of School Sch			<del></del>
(	Ąĺ.	REVIEW BY ORIGINAL DESI	GN ORGANIZATION	COMMENTS	·	
			and the second distribution of the second distri	·		
				• 1		
		☐ AGREE PF IS VALID	•	•	. '	
		□ DISAGREE				
		BY:	DATE:			
	).	RECOMMENDATION BY FINE	DINGS REVIEW COMMITTEE	and the Market and the Committee of the		
		DEFINITION ADEQUACY: VALIDITY:	M VALIS	□ INADEQUATE		
		CLASSIFICATION:	⊠ VALID	INVALID	١.	
			☑ OBSERVATION	☐ FINDING		
		JUSTIFICATION:	BION NO			
			RION NO. RESULTING IN "FIN ATION" CLASSIFICATION	VDING"	•	
		Error in	line lable which	does not affect	clesijn.	
					,	
						. *
			•			
					·	
		BY: S. S. Kou	DATE: 1/20	<u>/</u> 8′z	•	
Ε		GA PROJECT MANAGER				······································
		X ACCEPT	•			•
		□ REJECT	•	٠		
		1				<u></u>
		1				
		BY: Falleuman	V DATE: 1/22/8	<u> 2</u> 2		

			_	
~		٠	<b>4 4 1 6 1 1</b>	
١.	Å	7.	MOITA	
u	_	٠,	PILON	
_	_			

COMMENTA

REVIEW BY ORIGINAL DESIGN OR Drawing 1204-109-1 is for Unit 2 and 3. The configuration as shown is for Unit 3; However, line 109 is mirror fnage for Unit 2. No node points were shown on this drawing since they were shown on 1204-004-1. Line 109 is shown on 1204-004-1 been the check valve and node point 40 although not identified. The computer runsflect the configuration shown on 1204-004-1 and therefore include this line.

AGREE PF	IS VALID	Me	S#7=
AGREE PF I	ALRfiel	2 Jzh	

BY: 12/5-82 DATE: 1-15-82

## RECOMMENDATION BY FINDINGS REVIEW COMMITTEE

**D** INADEQUATE DEFINITION ADEQUACY: - D-ADEQUATE

VALID **D** INVALID VALIDITY:

☐ APPLICABLE D NOT APPLICABLE 10 CFR 21:

D NOT APPLICABLE ☐ APPLICABLE 10 CRF 50.55(c):

**D** OBSERVATION **D** FINDING CLASSIFICATION:

#### JUSTIFICATION:

CLASSIFICATION CRITERION NO. RESULTING IN "FINDING".

COMMENT ON "DESERVATION" CLASSIFICATION

DATE:

# TPT PROJECT MANAGER

ACCEPT

D REJECT

BY: \_\_\_\_ DATE: \_\_\_

S.I. Line to Reactor Coolant Loop 1A, Piping Package PSG 82 AFFECTED ITEM: .

1. IS THERE THE POTENTIAL FOR REDUCING DESIGN MARGINS TO THE EXTENT DESIGN ALLOWABLES ARE EXCEEDED OR DESIGN REQUIREMENTS ARE NOT MET?

No

2. IS THERE THE POTENTIAL THAT THE ITEM MIGHT FAIL OR ENDANGER OTHER ITEMS DURING AN SSE?

No

3. COULD THE FAILURE OF THIS ITEM DURING AN SSE CREATE A SUBSTANTIAL SAFETY HAZARD?

No

4. COULD THE PROCEDURAL VIOLATION CREATE A SUBSTANTIAL SAFETY HAZARD?

No

5. ARE OTHER SIMILAR DEVIATIONS LIKELY TO EXIST?

I cannot make judgment based on this one case.

6. OTHER COMMENTS:

Per discussion with Bechtel on January 11, 1982, Bechtel was aware of the incorrect identification of the line 109 on ISO Dwg. 1204-004-01.

PREPARED BY: \_\_\_\_F. Lin \_\_\_

**COMMENTS:** 

Agree with reviewer's impact assessments
based on BPC's response to PF

cheficition

#### TENTIAL FINDING REPORT Scismic design verification SONGS 2

2403-PFR-0004			
PFR NO.	•		
REVISION			

DATE: .

	ŤIO 81	077	3 4 1	MITE.	ATCR
TO HA	111344	DIC	177	.,,,,,	7707

AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop 1A Piping Stress Analysis Package PSG-245

REQUIREMENT REFERENCE DOCUMENTS:

User's Manual ME 101 linear clastic analysis of piping systems.

BASIC REQUIREMENT:

ASME Section III NC-3673.2 requires that a stress intensification factor be used for reducers.

At node points 144 and 145 where the highest DBE DESCRIPTION OF POTENTIAL FINDING: seismic stress occurs (7180 psi) the reducer is not specified in the input and there is no stress intensification factor applied at that location. The code requires a stress Intensification factor for reducers be used which would increase stresses.

I agree with the Original Design Orgs. Comments
Nevillehnarsh 1-11-82 N. Marsh PREFARED EY: \_ DATE: \_\_\_\_ REJECTION OF GAITASK LEADER COMMENTS BY: DATE: \_ REJECTION OF DRIGINAL DESIGN ORG. COMMENTS BY: \_

B. REVIEW BY GA TASK LEADER

COMMENTS

TEH BY GA TASK LEADER

1 agree with the above Design Orga somments

1/20/82

1/1/16/02

AGREE PF IS VALID	BY C	Chaman (30	DATE
 REGUEST RE-REVIEW	8Y		DATE
DISAGREE	. BY	·	CAYE
REVIEW DE ORIGINAL	DESIGN DRGS	COMMENTS BY:	

## \*REVIEW BY ORIGINAL DESIGN ORGANIZATION

#### COMMENTS

Per NC-3673.2, the stress intensification factor at the reducer is calculated on ige 12 of calculation M-1204-063-2 (PSG 245). The SIF for this reducer was determined to be one, and therefore, the SIF at this location is included in the analysis. See Summer 1976 Addenda to NC-3673-2 for corrected formula.

the analysis. See Sum	mer 1976 Addenda to NC-	-30/3-2 for corrected formula:
D AGREE PF IS VALID  DISAGREE  SALT  BY: 1015	Agre  BATE: 1-15	e with Comment Nevilleharsh 1/20/81
RECOMMENDATION BY FIND	INGS REVIEW COMMITTEE	
DEFINITION ADEQUACY:	<b>⊠</b> ADEQUATE	D INADEQUATE .
VALIDITY:	- VALID	₩ INVALID
10 CFR 21:	- D NOT APPLICABLE	D APPLICABLED SAK 1/20/82
10 CRF-50.55(e):	D NOT APPLICABLE.	□ APPLICABLE
CLASSIFICATION:	<pre>D OBSERVATION</pre>	☐ FINDING
STIFICATION:		
CLASSIFICATION CRITER	ION NO. RESULTING IN "FINI	DING"

BY: S. A. Kout DATE: 1/20/82

COMMENT ON "OBSERVATION" CLASSIFICATION

# E. TPT PROJECT MANAGER

ACCEPT

D REJECT

BY: Alleuman

DATE: 1/22/82

# SONGS 23 SEISMIC DESIGN VERIFICATION

2408-PFR-	-0005
PFR NO.	
REVISION	

,	B.E	PA	an.	T	101	EY	GA	INI	TIA	T	OR
•	 -		_	_			*				

AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop 1A

Piping Stress Analysis Package PSG-78

REQUIREMENT REFERENCE DOCUMENTS: Pipe Support Drg No. S2-S1-059-H-006

BASIC REQUIREMENT:

Calculations use latest design loads.

DESCRIPTION OF POTENTIAL FINDING: Support X-rigid at node 143 Drg. No. S2-S1-039-H-006 shows design loads of (+29850 and -25100). Sheet 63 of PSG No. 78 is given as (+43510 and -39901) for the loading at that support. An unsubstantiated statement that higher loads are still within the margin of safety was made.

Jagree with the original design orgs. comments
Nevilletuarsh
1/20/82.

TREPARED BY: N. Marsh Min DATE: 1/11/82

PREPARED SY: N. Marsh /INCh DATE: 1/11/82	
REJECTION OF GA TASK LEADER COMMENTS BY:	DATE:
REJECTION OF DRIGINAL DESIGN DRG. COMMENTS BY:	DATE:

B. REVIEW BY GA TASK LEADER

COMMENTS

I agree with the original design orgs comments

Charma 1/20/82

AGREE PF IS VALID	BY C Charman (80)	DATE		
DISAGREE .	EY	DATE		
T REVIEW OF ORIGINAL D	ESIGN ORGS. COMMENTS RY:		DATE:	
				*

PER NO.	2/11/13-11 11 11 000
REVISION	l

TEN BY DRIGINAL DESIG	NORGANIZATION	COMMENTS	
parently, the actual -51-059-H-006 is only	physical configuration a block in compression	was not clear to the review. It was obvious to the early transmitted through a 222 ksi vs. Allow of 31.9	6" X 6"
	Davas	with Constant	<i>-</i>
D AGREE PF IS VALID	ngree	with commen	· .
	2	with Commer Nevilleten	ash
DISAGREE SCAPAID  SOLITION  BY: -/ 215+		1,	20/82
BY: -/ 215 0 /a	212 DATE: 1-15-5	<u>32</u>	/ ~
). RECOMMENDATION BY FIND	INGS REVIEW COMMITTEE		
J. RECONTENSITION			•
DEFINITION ADEQUACY:	₩ ADEQUATE	☐ INADEQUATE	
VALIDITY:	□ VALID	M INVALID	·
10 CFR 21:	O NOT APPLICABLE	APPLICABLE	1/V 1/- 1/-
10 CRF 50.55(e):	- D NOT APPLICABLE	APPLICABLE	1K 1/20/82
CLASSIFICATION:	D DBSERVATION	FINDING	
TIFICATION:		•	
	ION NO. RESULTING IN "FIN	DING"	• •
,		DINO	
COMMENT ON "DESERVA	TION" CLASSIFICATION		•
	•		,
•		·	
	•	•	
•			

. TPT PROJECT MANAGER

BY: S. L. Kouty

ACCEPT

D REJECT

DATE: 1/20/82

				,	7.4 - 44		
		21.0	<b>'\O</b> _	. D 17	บ_ก	012	
000		241	JO-	LL	ハーロ	UIL	
PFR	NII						
	ITU.						

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

A. PREPARATION BY GA INITIATOR
--------------------------------

AFFECTED ITEMS: LPSI Pump P-016 and Support Structure

#### **REQUIREMENT REFERENCE DOCUMENTS:**

1. San Onofre 2 & # FSAR, Fig. 3.7A-93, 3.7A-94 and 3.7A-95, Bldg. Response Spectra.

2. CE Spec. 1370-PE-410, Rev. 07

3. Vendor (I-R) Pump General Arrangement and Installation Criteria Documents C-8 x 20 WDFB6 x 21, Rev. 01 and L.N. 8x20WDFB6x21, Rev. 01

4. Vendor Analysis Report EAS-TR-7625N BASIC REQUIREMENT:

Vendor used acceleration values of 1.0 G vertical and 1.5 g horizontal for static analysis of pump components, which assumes little if any amplification of building accelerations.

#### DESCRIPTION OF POTENTIAL FINDING:

Potential failure of pump support structure design to meet assumptions used in vendor analysis and potential overstress of pump mounting bolts. Check calculation indicates strength of mounting bolts specified by vendor may be marginal. Documents on design and analysis of pump support structure were not available for this review.

	PREPARED BY: T. D. Stanley  REJECTION OF GA TASK LEADER COMME  REJECTION OF ORIGINAL DESIGN ORG. C	NTS BY:	DATE: DATE:	· ·
В.	REVIEW BY GA TASK LEADER	COM	MENTS	
	Re-versews  additional info  Pump support structure drawle  The rigidity of the support stru  of the mounting bolts using so  and damping of the pump/s  loadings indicated by BPC pipe  the vendor calculations indicate  AGREE PF IS VALID  BY  REQUEST RE-REVIEW  BY  REVIEW OF ORIGINAL DESIGN ORGS.	cture was determined ismic loadings consist upport assembly and ing analyses rather the efect the strength of	to be adequate and a re- ent with the natural frequency actual (lower) piping n	ossile used in teg
		,		

C.	REVIEW BY ORIGINAL DESIGN	ORGANIZATION	COMMENTS	
	☐ AGREE PF IS VALID☐ DISAGREE			
l	U DISAGREE	•		
	BY:	DATE:	<del></del>	
D.	RECOMMENDATION BY FINDIN	GS REVIEW COMMITTEE		. :
	DEFINITION ADEQUACY:	ADEQUATE	☐ INADEQUATE	
	VALIDITY:	□ VALID	<b>⊠</b> INVALID	
	CLASSIFICATION:	□ OBSERVATION	☐ FINDING	
	JUSTIFICATION:		·	•
	CLASSIFICATION CRITERIO	ON NO. RESULTING IN "FIND	DING"	
	COMMENT ON "OBSERVATI	ION" CLASSIFICATION		
	•			
	•			
		•	•	
	BY: S. d. Kouh	DATE: 1/24/	82	
E.	GA PROJECT MANAGER			· · · · · · · · · · · · · · · · · · ·
	⊠ ACCEPT			. *
	□ REJECT			•
			,	
	•			
	- All Justine	NATE. 1/24/8	7	•

PFR NO. 2408 P	FR-DO	18
----------------	-------	----

# SONGS 283 SEISMIC DESIGN VERIFICATION

## A PREPARATION BY GA INITIATOR

AFFECTED ITEMS: 'Safety Injection Line to Reactor Coolent Loop IA, Piping Stress Analysis Package PSG-78, Node 146 (Incorrectly shown as Node 147, Ref. 2408-PFR-0006) Tag No. S2-S1-059-H-009.

REQUIREMENT REFERENCE DOCUMENTS:

Specification 5023-409-2, Nuclear Service Fipe Supports, Hangers and Accessories for San Onofre Nuclear Generating Station, Units 2 and 3, Page 4F-9 (4/24/74).

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

DESCRIPTION OF POTENTIAL FINDING:

Revised Calculation PASO-1.109 - 9.100, Sht. 1 uses weld allowable atress of 13.6 KSI, which is the allowable in AISC Spec (1963) for ESCRI electrods. The weld allowable stresses in AISC (1969) to 18 KSI for ESCRI electrods. The calculation uses weld allowable stresses for 2 different electrodes without celling out the electrodes.

This PFR is considered to be invalid (See attachment)

PREPARED BY:

PREPARED BY:

REJECTION OF GA TASK LEADER EOMMENTS BY:

REJECTION OF DRISHAL DESIGN ORG. COMMENTS EY:

DATE:

C. REVIEW BY GA TASK LEADER

COMMENTS

COMMENTS

AGREE PF IS VALID	er 1800us	DATE 1/15/52
REQUEST RE-REVIEW	BY /	DATE
D DISAGREE	8Y	DATE
O REVIEW OF ORIGINAL D	esign orgs, comperts by:_	nete

PER NO.	2408	PFR-0018	
---------	------	----------	--

# POTENTIAL FINDING REPORT REVISION \_\_\_\_ SONGS 2&3 SEISMIC DESIGN VERIFICATION

A. PREPARATION BY GAINITIAT	TOR
-----------------------------	-----

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) Tag No. S2-S1-059-H-009.

REQUIREMENT REFERENCE DOCUMENTS:

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

BASIC REQUIREMENT: 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 AISC Spec (1963) for E60XX electrode. The weld allowable stress
in AISC (1969) is 18 KSI for E60XX electrode. The calculation uses weld allowable stresses
for 2 different electrodes without calling out the electrodes.

	PREPARED BY: Zimmer War June 1-18-82		
	REJECTION OF GA TASK LEADER COMMENTS BY:	DATE:	
	REJECTION OF ORIGINAL DESIGN ORG. COMMENTS BY:	DATE:	
В.	REVIEW BY GA TASK LEADER	COMMENTS	-

) }	AGREE PF IS VALID	BY ASSOCIATION	DATE 1/15/12
	☐ REQUEST RE-REVIEW	BY	DATE
	☐ DISAGREE	BY	DATE
	REVIEW OF ORIGINAL DE	SIGN ORGS. COMMENTS BY:	DATE:

<b>.</b> .	P 1 /1 P 161	DV DDI	CIR. A.	DECICAL	DDC ANITATION
C. M	IE VIEW	ואט זט	DINAL	ひとりいしゅ	ORGANIZATION

The weld stress allowable of 13.6 ksi is not used in the referenced calculation. design methodology uses the lower allowable stress of the two electrodes used for pipe Support steel which are given in Specifications SO23-206-18 and CSP207.

The AISC Code allowable stress for seismic loads is 16.93 ksi in the leg of the weld (based on Fy = 31.9 ksi and E60XX electrodes and a 1/3 increase in allowable for seismic loading). The calculation is conservative because the weld allowables used are less than the AISC Code allowable for seismic loads.

D AGREE PF IS VAUD

	DIS	AG	RE	E
--	-----	----	----	---

D.	RECOMMENDA!	TICN BY F.	NDINGS REVIEW	COMMITTEE

DEFINITION ADEQUACY:

M ADEQUATE

☐ INADEQUATE

VALIDITY:

VALID

**☑** INVALID

10 CFR 21:

D-NOT-APPLICABLE

D APPLICABLE SHE 1/24/82

10 CRF 50 55(e):

O NOT APPLICABLE

- APPLICABLE

CLASSIFICATION:

O OBSERVATION

D FINDING

STIFICATION:

CLASSIFICATION CRITERION NO. RESULTING IN "FINDING".

COMMENT ON "DESERVATION" CLASSIFICATION

# E. TPT PROJECT MANAGER

M ACCEPT

D REJECT

BY Allewnan DATE 1/24/82

**GENERAL ATOMIC COMPANY** GA 268 REV. 6-79 CALCULATIONS FOR PAGE CALC. NO. PROJ. NO. EQUIP. NO. REF. DOCUMENTS: DATE PREPARED BY 4. Limmer Attachment to PPR-018 0018 spe DATE REVIEWED BY APPROVED BY DATE A. Per a telecon on 1/23/82 with R. C. Rogers and others from Bechtel it was stated that the Bechtel design engineers were instructed, as a policy to use conservative allowable stresses instead of the allowable defined in the design spec (5023-409-7 p. 4F-9) FSAR (3.8.3.3.2) for DBE louding It was also stated the same telecon that the weld leg allowable 14.85 KSI used in the calculation (P450-1.109-9,100) 15 equal to the AISC (1969) weld leg 18 KSI x 0.707 = 12.73 KSI times a factor of 1.167. This allowable stress increase of 16,7% loading is one half the allowable stress increase The original design org. PFR-0019 review dated 1/21/82 (ie. 33 1/3 % increase to 16.93) but is conservative. A 9,57 leg weld allowable (13.6 KSI throat allowable is also used in the calc but is also conservative. Therefore, the Initiator agrees with the original design organization's review statement that the allowables used in the calculation are conservative for DBE loading and results in a conservative design. Therefore, PFR-0018 is considered to be invalid by the initiator. Summ llan

الانام.	
100.1	$\mathcal{C}V_{\sim}$
WILL	10,0
	0/
"	10.1
	/ · A

# SONGS 283 SEISMIC DESIGN VERIFICATION

R DR	an.	4400711X-001	2
TH	M.		

REVISION\_

The state of the s	A.	PREPA	HOITAS	BYEA	ROTAITIMI
--	----	-------	--------	------	-----------

AFFECTED ITEMS: Safety Injection Line to REactor Coolant Loop IA. Piping Stress Analysis
Package PSG-73, Hode 145 (Incorrectly shown as mode Es. 147, Ref. 2403-PVR-0006),
REQUIREMENT REFERENCE DOCUMENTS:

Specification SO23-409-2. Nuclear Service Pipe Supports, Eangers and Accessories for San Onofre Nuclear Generating Station, Units 2 and 3, Page 4F-9 (4-24-74).

#### BASIC REQUIREMENT:

: Allowable stress under DBE loading for structural steal is 0.90 times the minimum guaranteed yield stresses listed in the AISC Spec. (Feb. 12, 1969).

DESCRIPTION OF POTENTIAL FINDING: Revised calculation P430-1.109 - 9.100, Eat. 1 uses bending allowable = 19.16 ESI (0.57y x 0.9) and weld chear allowable acrosses of 19.6 ESI and 21.0 ESI which are not equal to 0.9 x Fy per the basic requirement.

PFR is invalid (See at	tocked reason)	Alun Jimm
PREPARED BY: A. 21	DATE: 1/16/82	1/23/82 RD1/3/82
PREPARED BY: A. Zimmer REJECTION OF SA TASK LEADER COMMENTS S	DATE: 2000	DATE:
REJECTION OF DRIGINAL DESIGN ORG. COMME	•	DATE:

## B. REVIEW BY GA TASK LEADER

COMMENTS

AGREE PF IS VALID	BY Solis	DATE 11.2/6~
A REQUEST RE-REVIEW	6Y	DATE
D DISAGREE	BY	DATE

	_
PFR NO. 2408-PFR-0019	İ
REVISION	
ATION	
•	7
• • • • • • • • • • • • • • • • • • •	1
oop lA, Piping Stress Analysis	s
, Ref. 2408-PFR-0006),	
ngers and Accessories for	
4F-9 (4-24-74).	
0.90 times the minimum	
, 1969).	
-1.109 - 9.100, Sht. 1	
hear allowable stresses r the basic requirement.	
xuqua mumbis	
	İ
_ DATE:	
DATE:	
TO	1
TS	
•	
•	
11/8/82	
11/0/0	

	POTENTIAL FINDING	
	SONGS 2&3 SEISMIC DESIGN	VERIFICATION
Э— А.	PREPARATION BY GA INITIATOR	•
	AFFECTED ITEMS: Safety Injection Line to REactor Package PSG-78, Node 146 (Incorrectly shown as no REBUTREMENT REFERENCE DOCUMENTS:	Coolant Loop 1A, Piping Stress Analyode No. 147, Ref. 2408-PFR-0006),
	Specification S023-409-2, Nuclear Service Pipe Su San Onofre Nuclear Generating Station, Units 2 and	
	BASIC REQUIREMENT:	
	Allowable stress under DBE loading for structural guaranteed yield stresses listed in the AISC Spec	
	DESCRIPTION OF POTENTIAL FINDING: Revised calculuses bending allowable = 19.14 KSI (0.6Fy x 0.9) of 13.6 KSI and 21.0 KSI which are not equal to 0	and weld shear allowable stresses
9 <u>0</u> .		
3	Clanzon Na Zimmer Dars 1/16	5/82
	REJECTION OF GA TASK LÉADER COMMENTS BY:	DATE:
	REJECTION OF ORIGINAL DESIGN ORG. COMMENTS BY:	DATE:
В.	REVIEW BY GA TASK LEADER	COMMENTS
		•
	AGREE PF IS VALID BY	DATE 11/8/82
	REQUEST RE-REVIEW BY	DATE
	□ DISAGREE BY	DATE
	☐ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY:	DATE:

ald w. #	
REVISION	
FI AGAIN OF	
FF 19 12 SAK 1/24/82	

#### REVIEW BY ORIGINAL DESIGN ORGANIZATION

#### COMMENTS

The AISC allowable bending stress for structural steel is 0.6 Fy = 19.4 ksi (A-36 steel at 300°F). For DBE loading, the allowable bending stress for structural steel is 0.9 Fy = .71 ksi (A-36 steel at 300°F). Bechtel conservatively used 19.14 ksi allowable bending tress for DBE loading.

10006

For weld allowable stresses, BPC design methodology uses the lower allowable stress of the two electrodes used for pipe support steel which are given in Specifications S023-206-18 and CSP207.

DISAGREE SHF

□ AGREE PF IS VAUD The AISC Code allowable stress for seismic loads is 16.93 ksi in the leg of the weld (based on Fy = 31.9 ks1 and E60XX electrodes and a 1/3increase in allowable for seismic loading). The calculation is conservative because the weld allowables used are less than the AISC Code allowable for seismic loads.

RECOMMENDATION BY FINDINGS REVIEW COMMITTEE

h	2 2	1 KJ	17	in N	A	nr	n.	A	CY:	
IJ	t r	IN	11	iun		Цt	L/ 1	LΑ	LI	

M ADEQUATE

☐ INADEQUATE

VALIDITY:

D VALID

M INVALID

10 CFR 21:

- NOT APPLICABLE

O NOT APPLICABLE

O APPLICABLE

10 CRF 50.55(e): CLASSIFICATION:

O OBSERVATION

D FINDING

TIFICATION:

CLASSIFICATION CRITERION NO. RESULTING IN "FINDING"

COMMENT ON "OBSERVATION" CLASSIFICATION

DATE: 1/24/82

TPT PROJECT MANAGER

M ACCEPT

D REJECT

CALCULATIONS FOR	PROJ	NO.	CALC. NO.	PAGE OF
· 1 - 7		DATE		
REVIEWED BY	rner	DATE	Attach 2	408 - PFR - 0019
APPROVED BY		DATE	7///44.	, , ,
Λ		: ; ! !		
and others  Bechtel des  Use conserva  defined in  FSAR (3.8.)  In the sam  14.85 KSI  15 equal t	from  ign eng  five al  the d  3.3.2)  tele  oscol  the	Bechter Incers Vonoble esign for DBE con the AISC (19	pec (5023-409- louding. It at the weld leg calculation (Per 169) weld leg	of the allowable  2 p. AF-9) and  was also stated  allowable of
This allo loading I mentanea review d	nuble sone	stress , half the the orig	increase of 16,7° ollowable str inal design o . 331/37, increas	25 for seismic ess incruse rg. PFR-0019
statemen Calculation	nservor the the it the in arc	hve. The	al design organ allowables use a tive for DB ervative des	nitiator nization's review din the Elooding ign. Therefore,
statemen Calculation	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nization's review din the Elooding ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nization's review din the Elooding ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nization's review din the Elooding ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nigation's review din the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nizatron's review din the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nisatron's review d in the E looding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nisatron's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nisatron's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nisatron's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nisatron's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiotor nisation's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nisatron's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nisatron's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nisatron's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiator nisatron's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiotor nisation's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiotor nisation's review d in the Elooding. ign. Therefore,
statemen Calculation and resul	nservor the the it the in arc	hve. The conserva conserva	al design organ allowables use a tive for DB ervative des	nitiotor nisation's review d in the Elooding. ign. Therefore,

PFR NO. 2403-PPR-0020
REVISION
 N 0

# SONGS 283 SEISMIC DESIGN VERIFICATION

<b>A</b> . !	PREPARA	TIOH BY GA	ROTAITINI

AFFECTED ITEMS: Safety Injection Line to Resetor Coolent Loop 1A, Piping Street Amelysis Package PSG-78. Calculation Shorts for Hode 167, Tag No. 52-51-059-0008.

REQUIREMENT REFERENCE DOCUMENTS:

Specification 5023-409-2 "Ducter Service Pipe Support, Mangers and Accessories for :
80%GS 2 and 3" Certified 4/24/74, p. 47-9

## BASIC REQUIREMENT:

Allowable stresses under DER for structural stock at standard temperature shall be 0.9 times the minimum guaranteed yield strusses linted in ALSC Epec. 1969.

DESCRIPTION OF POTENTIAL FUNDING: .6 Ty x Q2 = 19.14 ESI for allowable bending stress.

Theet 3 of the calculation uses: .6 Ty x Q2 = 19.14 ESI for allowable bending stress in the weld. (describe and weld electrode not identified).

PFR is	invalid. S	Gee 2408-PFR-0019.	118/
The	subject of this	PFR is the sauce	1/24/82 Disposition is OK. PSO 1/24/Er
MEPARED BY: T.T.Lee	27	DATE: 1-18-52	Bo 1/24/
REJECTION OF GALLASK CE	EAUEN LUMMENTA BI		••••
REJECTION OF ORIGINAL I	design org, commen	TS BY:	CATÉ:

B. REVIEW BY GA TASK LEADER

COMMENTS

D'AGREE PF IS VALID D'REQUEST RE-REVIEW D'DISAGREE	BY Asples	DATE DATE	DATE:	
D REVIEW OF DRIGINAL D	ESIGN ORGS. COMMENTS BY:			

PÉR	NΩ	2403-PFR-0020
EFI	IVU.	3. 7.7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

# POTENTIAL FINDING REPORT SONGS 2&3 SEISMIC DESIGN VERIFICATION

REVISION	<b>-</b>
112 1101011	

I
-
2.7.3
F

#### A. 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:

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: .6 Fy x 09 = 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:	DATE:
REJECTION OF ORIGINAL DESIGN ORG. COMMENTS BY:	DATE:

# B. REVIEW BY GA TASK LEADER

COMMENTS

AGREE PF IS VALID  REQUEST RE-REVIEW	BY Males	DATE	•
☐ DISAGREE	BY	DATE	
 ☐ REVIEW OF ORIGINAL DI	ESIGN ORGS. COMMENTS BY:		DATE:
		-	•

201,460	TENTINE ZADO-11- 3-1
EFR-020	REVISION
W 1/24/02	

	REVIEW DY ORIGINAL	DESIGN ORGANIZATION
•		

#### COMMENTS

•	This	is identical to that of PFR-001	9
	"The	ATSC allowable handing because 6	_

illowable bending atress for structural steel is 0.6 Fy = 21.6 ksi (A-36 steel. For DBE loading, the allowable bending stress for structural steel is 0.9 Fy = 32.4 ksi (A-36 steel) Bechtel conservatively used 19.14 ksi allowable bending stress for DBE loading.

For weld allowable stresses, BPC design methodology uses the lower allowable stress of the two electrodes used for pipe support steel which are given in Specifications S023-206-18 and CSP207.

AGREE PF IS VALID

The AISC Code allowable stress for seismic loads is 16.93 ksi in the leg of the weld (based on Fy = 36 ksi and E60XX electrodes and a 33 1/3% increase in allowable for seismic loading). The calculation is conservative because the weld allowables used are less than the AISC Code allowable for seismic loads.

DATE: 127/82

D.	RECOMMENDATION	SEMICHIA YEV	REVIEW COMMITTEE

DEFINITION ADE	DUACY:
----------------	--------

ADEQUATE.

INADEQUATE

VALIDITY:

U VALID

M INVALID

10 CFR 21:

TO NOT APPLICABLE

D APPLICABLE

10 CRF 50.55(e):

O NOT APPLICABLE

- APPLICABLE

CLASSIFICATION:

O DBSERVATION

D FINDING

# JUSTIFICATION:

CLASSIFICATION CRITERION NO. RESULTING IN "FINDING"

COMMENT ON "OBSERVATION" CLASSIFICATION

Kouh DATE: 1/24/82

# E. TPT PROJECT MANAGER

M ACCEPT

D REJECT

Alleman DATE: 1/24/82

ora l	иο	2408-PFR-CO21
rrn	RU.	2400-178-0021

# POTENTIAL FINDING REPORT REVISION. SONGS 223 SEISMIC DESIGN VERIFICATION

A	PREPARATION BY GA INITIATOR

AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop IA, Piping Stress Analysis Fackage PSG-78. Calculation sheets for Hode 167. Tag No. 62-51-059-1008.

REQUIREMENT REFERENCE DOCUMENTS:

Specification 5023-409-2, "Muclear Service, Pipa Support Hangers and Accessories for SONGS 2 6 3 , Certified 4/24/74, p. 47-9.

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

DESCRIPTION OF POTENTIAL FINDING:

Calculation sheet 4 wass 13.6 KSI for the allowable shearing stress in the wald. In ALEC Epec. 1969 the corresponding allowable is 18.0 KSI.

PFR is invalid	See response 2	5 PFR-0018. Deff
PREPARED BY: T.T.Los 71	DATE:1-18-82	PS01/24/82 1/24/82
REJECTION OF GA TASK LEADER COMMENTS		
rejection of original design org. Colle	JENTS BY:	DATE:
######################################		

B. REVIEW BY GA TASK LEADER

Comments

D AGREE PF IS VALID D REQUEST RE REVIEW	BY ROLLS	DATE 1/18/82	•
D DISAGREE	ESIGN ORGS, COMMENTS BY:	DATE	BATE:

_			21	408-PFR-0021
P	FR	NO	٠.	1007 1110 0021

_				
R		101	ON	
	LV	1.31	1114	

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

A.	PREPA	RATION	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.

		-
REJECTION OF ORIGINAL DESIGN ORG. COMMENTS BY:	DATE:	
REJECTION OF GA TASK LEADER COMMENTS BY:	DATE:	
PREPARED BY: T.T.Lee DATE: 1-18-82		

## B. REVIEW BY GA TASK LEADER

COMMENTS

AGREE PF IS VALID  REQUEST RE REVIEW	BY ROLLS	DATE 1/18/82	
D HEADEST HE-HEVIEW	51	DATE	•
□ DISAGREE	BY	DATE	
☐ REVIEW OF ORIGINAL DE	SIGN ORGS. COMMENTS BY:		DATE:
			<u> </u>

SAK 1/24/82

FFIC 0031
PFR NO. 2408-PPR-0
REVISION

 				_		
REVIE	N BY	ORI	GINAL	DESIGN	DRGAN	IZAT
_			4.1.			

COMMENTS

Response is identical to that of PFR-0018.

"BPC design methodology uses the lower allowable stress of the two electrodes used for pipe support steel which are given in Specifications SO23-206-18 and CSP207.

The AISC Code allowable stress for seismic loads is 16.93 ksi in the leg of the weld (based on Fy = 36 ksi and E60XX electrodes and a 33 1/3% increase in allowable for seismic loading). The 14.85 ksi allowable was used considering only half the increase (i.e., 16 1/2% instead of 33 1/3%). The calculation is thus conservative because the weld allowables used AGREEPFIS VALID are less than the AISC Code allowable for seismic loads."

DISAGREE /ZM

BY: RRoyer

DATE: 1/22/82

D.	RECOM	'Endati	CNEYF	ZEMCM.	REVIEW (	33TTIMMO

DEFINITION ADEQUACY:

M ADEQUATE

INADEQUATE

VALIDITY:

D VALID

INVALID

40 CFR 21:

O NOT APPLICABLE

D APPLICABLE SIK 1/24/82

10-CRF 50.55(a):-

CLASSIFICATION:

O NOT APPLICABLE

O OBSERVATION

O FINDING

D-APPLICABLE

JUSTIFICATION:

CLASSIFICATION CRITERION NO. RESULTING IN "FINDING"

COMMENT ON "DESERVATION" CLASSIFICATION

BY: S. A. Kouh

DATE: 1/24/82

# E. TPT PROJECT MANAGER

& ACCEPT

O REJECT

JMU cuman 1/24/82

DED NO	2408-PFR-0022
	2400 III 0022

DATE: .

# POTENTIAL FINDING REPORT REVISION . SONGS 283 SEISMIC DESIGN VERIFICATION

	SONGS 2&3 SEISMIC DESIGN VERIFICATION
Α.	PREPARATION BY GA INITIATOR .
	AFFECTED ITEMS: Safety Injection Line to Reactor Coolant Loop 1A. iping Stress Analysis Package PSG-78. Calculation sheets for Node 167. Tag No. S2-S1-
0	759-H008. REQUIREMENT REFERENCE DOCUMENTS:
	Not Applicable
	BASIC REQUIREMENT:
	Not Applicable
	DESCRIPTION OF POTENTIAL FINDING:
7	The way the bending moment My was calculated in Sheet 3 for W6x25 (vertical) is difficult to justify from the mechanics point of view.
)	T. T. Lee 1-18-82
	PREPARED BY: DATE: DATE: DATE: DATE:
	REJECTION OF ORIGINAL DESIGN ORG. COMMENTS BY: DATE:
В.	REVIEW BY GA TASK LEADER COMMENTS
	Perform calculation and compose results
	Perform calculation and composed reliebs  with BPC's.  The reviewer has performed  the alternate calculation in forth  Received the "as-built" revised calculation in forth
	Received the "as-built" revised calculation in 1901
-	Canneckin ust PED - PTR-0012 to modulas
	The "as-built" calcs in validates  the subject of this PFR. ffl 1/24/82  DATE  TO DECLIED BY  THE PROJECT DE DECLIED BY
	DATE DE REVIEW BY TO THE TIME BY

☐ DISAGREE

☐ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: \_

PFR	NO. 2408-PFR	-0022
RF\	/ISION	

REVIEW BY ORIGINAL DESIG	N ORGANIZATION	COMMENTS	S	
			<u>.                                    </u>	0
	•			1
U DISAGREE				
BY:	DATE:			•
RECOMMENDATION BY FIND	NGS REVIEW COMMITTEE		<i>(</i> ·	
DEFINITION ADEQUACY.	₩ ADEQUATE			
le le	K ADEQUATE			
1/24/	FZ ORSERVATION			
	L OBSERVATION	LI PINUING	: +	
		INDING"	<del>_</del>	
COMMENT ON "OBSERVA"	TION" CLASSIFICATION	•	· ·	
	•	•	•	
0 / //				
BY: S. L. Kon	DATE: 1/2	4/8z		
GA PROJECT MANAGER	<del></del>		*	<del></del>
⊠ ACCEPT	·		•	
□ REJECT	•			
LI REJECT				
· · · · · · · · · · · · · · · · · · ·				
· .				
BY: 4ll/yem	n DATE: 1/24/			
	RECOMMENDATION BY FINDS  DEFINITION ADEQUACY:  VALIDITY:  CLASSIFICATION:  CLASSIFICATION CRITERS  COMMENT ON "OBSERVA"  BY:  BY:  LANGE OF THE PROPERTY OF TH	BY:	BY:	BY:

# PFR NO. 2403-PFR-0023 REVISION \_\_\_\_\_\_ SONGS 2&3 SEISMIC DESIGN VERIFICATION

	•			
Α.	PREPARATION BY GA INITIATOR	•		
	AFFECTED ITEMS: Safety Injection Lir Piping Stress Analys			•
	REQUIREMENT REFERENCE DOCUMENTS:			•
]	ISO Drg. 1204-043-1, Computer Run Q22I	.27.		•
		•	•	
	BASIC REQUIREMENT: Valve C.G. shoul	ld be correctly	modeled for comput	ter input.
	•	:		
		•		
		•		· • • • • • • • • • • • • • • • • • • •
	DESCRIPTION OF POTENTIAL FINDING:	•	·	
	Vort. Office (-0.047)		ne mode for the C.Os vertical and hor	
)	039-8"c-FEE (0.1354)		set is included in er, the horizontal	
	PREPARED BY: A. Chuang	1 DATE: 1-18-8		
•	REJECTION OF GA TASK LEADER COMMENTS B	/	DATE:	·
	REJECTION OF ORIGINAL DESIGN ORG. COMME	ENTS BY:	D.	ATE:
В.	REVIEW BY GA TASK LEADER		COMMENTS	
			,	
		•		
			•	
		•		
	l (e		1	
	AGREE PE IS VALID BY 2:0	Their	DATE 1/19/83	•
	□ REQUEST RE-REVIEW BY	*	DATE	
	DISAGREE BY		DATE	
	☐ REVIEW OF ORIGINAL DESIGN ORGS. COMM	: IENTS BY:		DATE:

-		,	ucaiting Section
Ç,	REVIEW BY ORIGINAL DESIGN		COMMENTS
,	Orientation of a chack v	alva in a horizontal r	un is normally with bonnet up. Therefore,
	ting orge officer, without	u nogilgible, can be r	eadily identified and used in the computer a case where a check valve is located in a
•	ACTURE TOU AND THE OLD	untation of the bonner	shout the vertical exists to not contact the
	THE SHATAST HAS SECONILE	a ror the axial offset	because it is known. The Internal office of
	TE THEO SECOUNT MOUTH 16:	bute in minute differen	is in an 8 inch schedule 140 line and taking aces in stresses and support loads. There
	The no effect on the desi	K14.e	
	D DISAGREE ARE SHE	owever, the effect on	the design is not significant.
	ev. Allan	DATE: 1/21/	·
	77-0-04-	DATE: 42//	
D.	RECOMMENDATION BY FINDIN	35 REVIEW COMMITTEE	
	APPINIPIAN AMERICA		
	DEFINITION ADEQUACY:	M ADEQUATE	D INADEQUATE
	VALIDITY:	Q VALID	INVALID
	10 CFR 21:	D NOT APPLICABLE	D APPLICABLE SAK 1/23/82
	10 CRF 50.55(a):	O NOT APPLICABLE	- APPLICABLE
	CLASSIFICATION:	M OBSERVATION	
	JUSTIFICATION:	- aportianting	D FINDING
	203 TEIGATION:		
	CLASSIFICATION CRITERIO	N NO. RESULTING IN "FIND	ING"
	~ 0.33% of all	wall Alland	organt offset increase stress
	70 % 444	The many many	and exceeded. On
		\$	
			$\mathbf{v}_i$

E. TPT PROJECT MANAGER

M ACCEPT

D REJECT

DY: Allewinan

DATE: 1/24/82

#### IMPACT ASSESSMENT

2408-PFR-0023
PFR NO. \_\_\_\_\_

Safety Injection Line to Reactor Coolant Loop 1A AFFECTED ITEM: Piping Stress Analysis Package PSG-78

1. IS THERE THE POTENTIAL FOR REDUCING DESIGN MARGINS TO THE EXTENT DESIGN ALLOWABLES ARE EXCEEDED OR DESIGN REQUIREMENTS ARE NOT MET?

No

2. IS THERE THE POTENTIAL THAT THE ITEM MIGHT FAIL OR ENDANGER OTHER ITEMS DURING AN SSE?

No

3. COULD THE FAILURE OF THIS ITEM DURING AN SSE CREATE A SUBSTANTIAL SAFETY HAZARD?

No

4. COULD THE PROCEDURAL VIOLATION CREATE A SUBSTANTIAL SAFETY HAZARD?

No

5. ARE OTHER SIMILAR DEVIATIONS LIKELY TO EXIST?

There is no indication at this time another similar deviation will exist.

6. OTHER COMMENTS:

It is believed that the impact due to this PFR to the design of Safety Injection System piping and supports is not significant.

PREPARED BY

A. Chuang ( / Suanhante: 1-22-82

**COMMENTS:** 

Agree

BY: Tolles

DATE: 1/2.3/82

7			PER NO.	2408-PFR-0025
9:00		C. FINDING REPORT MIC DESIGN VERIFIC	REVISION	-
PREPARATION BY GA I	HITIATOR	•		•
AFFECTED ITEMS: Somelysis Package PSG	afety Injection Line 3-78. Calculation S	to Reactor Coolant heets for Rode 167.	Loop 1A, Piping Tag Ko. 52-51-0	Stress 59-H008
REQUIREMENT REFERE	ence documents:	·•••	•	•
ot Applicable			- <b>- 4</b> 1	<b>,</b>
BASIC REQUIREMENT:		•. •		
ot Applicable				
	•	•		
		•.•		
DESCRIPTION OF POTEI	"Hargin of safety	in as-built calculat	ions is adequat	e to accommod
The pote on Sheet 1 moderned loads. In modified dimension and load	"Margin of safety sclude DCN's 1, 2, ssions.) Sheet 3 s sagnitude. The incr	3,4,5, & 6"is not suithows an 1% nafety mentage in the naximal lect of changed dimentaged dimentaged by 21/16/82	batentiated. () rgin based on ti borizontal load	DCMS he original shown in ded.
TEJECTION OF GA TASK	"Margin of safety sclude DCN's 1, 2, sions.) Sheet 3 sagnitude. The incrediscussion on the eff.  T. T. Lee A. C. LEADER COMMENTS BY AL DESIGN DRG. COMMEN	3,4,5, & 6"is not suithows an 1% nafety mentage in the naximal lect of changed dimentaged dimentaged by 21/16/82	rgin based on the borizontal load asion was provided the base of t	DCMS he original shown in ded.
e note on Sheet 1  200 and loads. In  200 and load a  201 and	"Margin of safety sclude DCN's 1, 2, sions.) Sheet 3 sagnitude. The incrediscussion on the eff.  T. T. Lee A. C. LEADER COMMENTS BY AL DESIGN DRG. COMMEN	3,4,5, & 6"is not suithows an 1% refery many same in the maximum lect of changed dimensional dimensional lateral later	rgin based on the borizontal load asion was provided the base of t	DCMS he original shown in ded.

D AEREE PER VALID D REQUEST RE-REVIEW

NY ROWN

DATE 1/19/8

חודי

<i></i>		PFR NO. 2408-PFR-00	025
· · · · · · · · · · · · · · · · · · ·	POTENTIAL FINDING REPORT	REVISION	
•	SONGS 2&3 SEISMIC DESIGN VERIFIC	•	
	·	•	
REPARATION BY GAI	NITIATOR		
AFFECTED ITEMS: Sa	afety Injection Line to Reactor Coolant 1 G-78. Calculation Sheets for Node 167:	Loop 1A, Piping Stress	
•	•		
REQUIREMENT REFER	ENCE DOCUMENTS:		
	•		
t Applicable		-	
		• • •	
BASIC REQUIREMENT:		•	
ot Applicable			
	·		
ESCRIPTION OF POTE	NITIAL CINIDING.	•	
e note on Sheet l creased loads. I ves modified dime mension and load	"Margin of safety in as-built calculated clude DCN's 1, 2, 3,4,5, & 6"is not substitute. Sheet 3 shows an 1% safety magnitude. The increase in the maximum of discussion on the effect of changed dimensions.	bstantiated. (DCN5) rgin based on the origina horizontal load shown in	
e note on Sheet l creased loads. I ves modified dime mension and load	"Margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not substitute. Sheet 3 shows an 1% safety materials magnitude. The increase in the maximum of discussion on the effect of changed dimensionals.	bstantiated. (DCN5) rgin based on the origina horizontal load shown in	
ne note on Sheet 1 icreased loads. I ves modified dime imension and load neet 1 is 32%. No	"Margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not substitute. Sheet 3 shows an 1% safety materials are increased in the maximum of discussion on the effect of changed dimensions."  T. T. Lee A. DATE: 1/18/82	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.	
e note on Sheet 1 creased loads. I ves modified dime mension and load leet 1 is 32%. No	magnitude. The increase in the maximum discussion on the effect of changed dimensions.  T. T. Lee DATE: 1/18/82	bstantiated. (DCN5) rgin based on the original horizontal load shown in ension was provided.  DATE:	
e note on Sheet 1 creased loads. I ves modified dime mension and load leet 1 is 32%. No	"Margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not substitute. Sheet 3 shows an 1% safety materials are increased in the maximum of discussion on the effect of changed dimensions."  T. T. Lee A. DATE: 1/18/82	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.	
ne note on Sheet 1 icreased loads. It is modified dime imension and load neet 1 is 32%. Note that is 32%. Note that is 32% is selection of GA TASKELECTION OF ORIGINAL CONTRACTOR CONTRACTO	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
e note on Sheet 1 creased loads. I ves modified dime mension and load leet 1 is 32%. No	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
e note on Sheet 1 creased loads. I ves modified dime mension and load neet 1 is 32%. No	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
e note on Sheet 1 creased loads. I ves modified dime mension and load leet 1 is 32%. No	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
e note on Sheet 1 creased loads. I ves modified dime mension and load leet 1 is 32%. No	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
e note on Sheet 1 creased loads. I ves modified dime mension and load leet 1 is 32%. No	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
e note on Sheet 1 creased loads. I ves modified dime mension and load neet 1 is 32%. No	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
ne note on Sheet 1 icreased loads. It was modified dime imension and load neet 1 is 32%. Note that the second of GATAS REJECTION OF GATAS	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
ne note on Sheet 1 acreased loads. It is modified dime imension and load neet 1 is 32%. Note that is 32%. Note that is 32% is 32% is selection of GA TASREJECTION OF ORIGINAL TARGET CONTRACTOR CONTRA	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
ne note on Sheet 1 ncreased loads. I lives modified dime imension and load neet 1 is 32%. Note that the second of GATAS REJECTION OF GATAS	margin of safety in as-built calculate include DCN's 1, 2, 3,4,5, & 6"is not sugnitions.) Sheet 3 shows an 1% safety may magnitude. The increase in the maximum of discussion on the effect of changed dimensions.  T. T. Lee  T. T. Lee  SK LEADER COMMENTS BY:  NAL DESIGN ORG. COMMENTS BY:	bstantiated. (DCN5 rgin based on the original horizontal load shown in ension was provided.  DATE: DATE:	
ne note on Sheet 1 icreased loads. It was modified dime imension and load neet 1 is 32%. Note that the second of GATAS REJECTION OF GATAS	T. T. Lee  SK LEADER COMMENTS BY:  LEADER  COMMINISTED AND A COMMENTS BY:  LEADER  COMMINISTED AND A C	bstantiated. (DCN5 argin based on the original horizontal load shown in ension was provided.  DATE:  DATE:	
ne note on Sheet 1 ncreased loads. I lives modified dime imension and load heet 1 is 32%. No	T. T. Lee DATE: 1/18/82  SK LEADER COMMENTS BY:  LE	bstantiated. (DCN5 argin based on the original horizontal load shown in ension was provided.  DATE:  DATE:	

DATE:

DATE\_

☐ DISAGREE

□ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: \_

REVIEW BY	ORIGINAL	DESIGN	ORGANI	ZATION

#### COMMENTS

The "as-built" revision dated 11/23/81 of the calculation inadvertently was not forwarded o you. Revisions 1 and 2 were sent. Revision 2 references the as-built calculation n the statement "Margin of Safety in As-Built Calcs...". The as-built calc. is attached.

The revised calculation removed the concern raised. The PFR is invalid.

D AGREE PF IS VALID

The revised calculation should be reviewed. The

DISAGPEE SHEW

D. RECOMMENDATION BY FINDINGS REVIEW COMMITTEE

DEFINITION ADEQUACY:

M ADEQUATE

D INADEQUATE

agree initial concern his been resolved.

· VALIDITY:

□ VALID

M INVALID

Committee will

10 CFR 21: 10 CRF 50 55(e):

D NOT APPLICABLE

<del>D-NOT-APPLICABLE</del>

T APPLICABLE-

SAK 1/24/82 check or review of serised calcs.

CLASSIFICATION:

O OBSERVATION

D FINDING

C APPLICABLE

STIFICATION:

CLASSIFICATION CRITERION NO. RESULTING IN "FINDING

COMMENT ON "OBSERVATION" CLASSIFICATION

TET PROJECT MANAGER

M ACCEPT

O REJECT

Allesman

# POTENTIAL FINDS SOMO 223 SEIGMIC DESI

nezoat Venifi <b>o</b> rion	Revision
	v

PREPA	RATION	BYBA	ROTAITIKI

AFFECTED ITEMS: Safety Injection Line to Reactor Coolent Loop 1A, Piping Stress Analysis Package PSG-78, Mode 146 (Incorrectly shown as Eode 147, Raf. 2403-PFE-0006) Tag. to. 82-81-039-H-009. REQUIREMENT REFERENCE DOCUMENTS:

Specification 5023-409-2, Exclear Service Pipe Supports, Congers and Accessories for Ben Choire Huclear Generating Storios, Units 2 and 3 . Section 45.1

BASIC REQUIREMENT:

Materials used in the support should be called out on dravings and documents.

OSSCRIPTION OF POTENTIAL FUNDING:

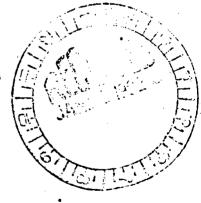
Calculations and drawings to not identify steel type for wald electrode weed.

PFR Considered invalid. See commend next page

	'Prepareo sy: .	PREPARED BY: A. Zimot DATE: 1/19/83			6 Jamm 122/32		
	rejection of t	ta tack leade	in countaits by:	TS 67:	DATÉ:		
-							

D. Neview by ga task leaden

COLUMBNIS



CAGREE PF 15 VALID	or finer	DATE 1/18/87
a request re-review	fY	DATE
CI DISAGREE	BY	CATE
THEVIEW OF ORIGINAL O	esign dags. Comments by:	DATE:

D-0074.142/	FIRMU. 24 0026	-
FK05-6.11	REVISION	_
SdK 1/24/	82	_

1	*		Sak 1/24/82
 ن	REVIEW BY DRIGINAL DESIG	N DEGANIZATION	COMMENTS
0	on each calculation.  Specification S023-206  Steel" for vendor m	The material and welding -18 "Quality Class I & I aterial, and specification	paterial and welding process/electrodes process requirements are specified in I Specification for Special Hiscellaneous on CSP207 for field fabrication.
	D AGREE PF IS VAUD  DISAGREE  HC 5+5+  BY:	Since Bechtel 1 material to be con calculations but in this potential was obtained by a	methodology does not require led out on the drawings one is covered in the specs finding his not valid to Clarificate tinding his not valid to Clarificate Telecon with R. L. Rogers on 1/22/82 Clarificate Clarificate Clarificate Clarificate Manual Clarificate
٥.	RECOMMENDATION BY FAN	DINGS REVIEW COMMITTEE	I egree PRERIED Sommer  I egree PRERIED Som  15 in valid Soll 1/22
	DEFINITION ADEQUACY:	- ADEQUATE	INADEQUATE PSO/24 1/22
	VALIDITY:	D VALID	MINVALID
	10 CFR 21:	- D NOT APPLICABLE	SAK 1/24/82
	10 CRF 50.55(t):	D NOT APPLICABLE	D APPLICABLE
	CLASSIFICATION:	D OBSERVATION	D FINDING

JUSTIFICATION:

CLASSIFICATION CRITERION NO. RESULTING IN "FINDING"

COMMENT ON "OBSERVATION" CLASSIFICATION

BY: S. d. Kout DATE: 1/24/82

E. TET PROJECT MANAGER

ACCEPT

D REJECT

BY. Alleisman DATE. 1/24

PFR NO.	2408-PFP-0029	
REVISIO	V	٠

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

A. PREPARATION BY G	A 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 5.11.3 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.

fter Rock

	PREPARED BY: Stan Ro REJECTION OF GA TASK LE REJECTION OF ORIGINAL D		DATE: DATE:
В.	REVIEW BY GA TASK LEADE	<u> </u>	COMMENTS
	·		
	AGREE PF IS VALID	BY ROUNT	DATE 1/19/8
	☐ REQUEST RE-REVIEW	BY	_ DATE
	D DISAGREE	BY	DATE
l	☐ REVIEW OF ORIGINAL D	ESIGN ORGS. COMMENTS BY:	DATE:

Protes

REVISION\_\_\_\_\_

C.	REVIEW BY ORIGINAL DESIGN	DREAMIZATION	COMMEN		
	Reference to 5.7.1 in par The reference should have	ragraph 5.11.3 of the	specification i	is a typogra kists, all r	phical error. equirements
	of the specification were	mer under section a.	11,75		
	// TA	AGREE THAT C.L	=15 12 ESPOIVA	Robber 1-	23-82
•		~~~		$\sim$	
	AGREEPF IS VALID		180/123	PER	6. Wessman - 2029
	DISAGREE		1011		
	BY: VCH-10	DATE: 1/25	182	hade	344
٥.	RECOMMENDATION BY FINDIN	es revien committee			
	DEFINITION ADEQUACY:	M ADEQUATE	TAUDEDANI D	<b>E</b>	•.
	VALIDITY:	C VALID	MINVALID	s. Si	
	CLASSIFICATION:	O DESERVATION	O FINDING	E. A., State State State	
	JUSTIFICATION:	••		3	
	CLASSIFICATION CRITERIO	n no. Resulting in "Fino	ing"		:
	COMMENT ON "DESERVATI	on" Classification		**. ***	
			• /		
		- /.			
			r		
		•			•
	· · · · · · · · · · · · · · · · · · ·	•		:	
	BY: S. a. Kout	DATE: 1/24/8	2		•
Ε.	GA PROJECT MANAGER			پیچندی این که داندند به در است.	
	☑ ACCEPT		. '		
•	□ REJECT		•		
	• (				
	• • • • • • • • • • • • • • • • • • •		•		<del>.</del>
	BY: Thelleuman	DATE: 1/24/82	-		
_		TO the september of			

PFR NO. 2408-PYN-0032
REVISION
on
oune)
and).
w enna 202-4 and
ec. No. 2023-302-4 and ters for the Coutharh
2 and 3:" .
•
evation and location become
•
•
d location
does not have which
nate.
DATE:
•
•

		A 1	FR NO. 240	B-PYM-00
	Itial finding Ref Eismic Design Ve		EVISION	- 8
A PREPARATION BY GA INITIATOR				
AFFECTED ITEMS: The Beimale Cat	tegory I Hotor Coatr	ol Centers C	cc).	•
REQUIREMENT REFERENCE DOCUMENTS:  8 Addendes "Quality Class II and II California Edison, Ban Captre Hucle	M. Soet. for Motor C	entrol Center	a lor the	302 <b>-4</b> an Eoutharh
BASIC REQUIREMENT: Section 4 of each MCC will be as specified in	.8 of Spec. states to n Exhibit A (Appendi	hat the eleva x B of the Sy	ition and l	iocation
	·	•		·
DESCRIPTION OF POTENTIAL FINDING:			,	
1. Exhibit A includes Electrical	line drawings, Ele	vetion, and le	sestion	
The British is a service of the serv	•			
information is missing.  2. Eccause the vendor does not be response spectra to test to	me where NSC's are (50' or Grade).	located ha Co	es set har	v viich
information is missing.  2. Eccause the vendor does not be	(50' or Grade).		es set har	w wich
information is missing.  2. Because the vendor does not be response spectra to test to	the state NSC's are (50' or Grade).  Walte: 2-19-82	0		
Information is missing.  2. Escause the vendor does not be response spectra to test to	the state NSC's are (50' or Grade).  Walte: 2-19-82	0	ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response to test to response spectra to test to response spectro of spectra to response spectra to response spectra to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra	the state NSC's are (50' or Grade).  Walte: 2-19-82		ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response to test to response spectra to test to response spectro of spectra to response spectra to response spectra to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra	the state NSC's are (50' or Grade).  Walte: 2-19-82		ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response to test to response spectra to test to response spectro of spectra to response spectra to response spectra to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra	the state NSC's are (50' or Grade).  Walte: 2-19-82		ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response to test to response spectra to test to response spectro of spectra to response spectra to response spectra to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra	the state NSC's are (50' or Grade).  Walter 1-19-82  HTS 8Y:		ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response to test to response spectra to test to response spectro of spectra to response spectra to response spectra to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra	the state NSC's are (50' or Grade).  Walter 1-19-82  HTS 8Y:		ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response to test to response spectra to test to response spectro of spectra to response spectra to response spectra to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra	the state NSC's are (50' or Grade).  Walter 1-19-82  HTS 8Y:		ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response to test to response spectra to test to response spectro of spectra to response spectra to response spectra to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra	the state NSC's are (50' or Grade).  Walter 1-19-82  HTS 8Y:		ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response to test to response spectra to test to response spectro of spectra to response spectra to response spectra to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra to test to response spectra	the state NSC's are (50' or Grade).  Walter 1-19-82  HTS 8Y:		ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to respect spectra to respect spectra to response spectra to r	the state NSC's are (50' or Grade).  Walter 1-19-82  HTS 8Y:	COLLMENTS  DATE ///	ATE:	
Information is missing.  2. Because the vendor does not be response spectra to test to response spectra to response spectra to test to response spectra to response spectra to test to response spectra to respect to resp	the state NSC's are (50' or Grade).  Walter 1-19-82  HTS 8Y:		ATE:	

				/0032
Č.	REVIEW BY ORIGINAL DESIGN	DRGANIZATION	COMMENTS	Sd.K 1/24/8
	Elevations and locations e.g., one line diagram 30 SWGR Room 2A El. 50'-0".	0137, Rev. B identific	n the one line diagrams of es location as "Control Bu	Exhibit A, ilding ESF
		agree	PFR is inval Beetfel spee to clear on this	Rid
	D AGREE PF IS VALID	However	Beebfel spee. to	eat
	DISAGREE \	is not	clear on this	pout
	BY: Skloger	DATE: 1/23		and dlets 1/23/82
D.	RECOMMENDATION BY FINDIN	3\$ REVIEW COMMITTEE	J	50,123/32
	DEFINITION ADEQUACY:	₩ ADEQUATE	INADEQUATE	
	VALIDITY:	□ VALID	M INVALID	
	10 CFR 21;	D NOT APPLICABLE	- D APPLICABLE	/ p >
	10 CRF 50.55(e):	D NOT APPLICABLE	- APPLICABLE	
_	CLASSIFICATION:	O OBSERVATION	Desired Desired	cusion with F. Ope
	JUSTIFICATION:	•	on 1/24.	1/82 confirms on spets of
	CLASSIFICATION CRITERIO	IN NO. RESULTING IN "FIN	voing qualy	hed remark about
	COMMENT ON "DESERVAT	•	PFR	is involed

BY: S. A. Kout DATE: 1/24/8.

E. TPT PROJECT MANAGER

ACCEPT

D REJECT

BY: Milliaman DA

DATE: 1/24/82

# POTENTIAL FINDING REPORT REVISION -SONGS 283 SEISMIC DESIGN VERIFICATION

,	SONGS 283 SEISMIC DESIGN VERIFICATION
A	PREPARATION BY GA INITIATOR  AFFECTED ITEMS: Bafety Injection Line to Reactor Coolent Loop 1A  Piping Strong Analysis Package PSG-78  REQUIREMENT REFERENCE DOCUMENTS:  150 Drg. 1204-043-1
	BASIC REQUIREMENT: Valve weight be included in exial restraint calculations.
	DESCRIPTION OF POTENTIAL FIEIDING: gheet 44 Calculation for the extal restraint at data point 5 did not include the weight of 950 lbs for valve (0°-072-4-552) although the weight of the piping (039-8-C-VED) on both cides of the valve was included.  PREPARED BY: A. Churds (Church Comments by DATE: 1/19/82  REJECTION OF GA TASK LEADER COMMENTS BY: CATE: CATE:
	B. REVIEW BY GA TASK LEADER
	D'AGREE PF IS VALID  BY  D'AGREE PF IS VALID  BY  D'ATE  DATE  DATE  DATE:  DATE:

REVIEW BY ORIGINAL DESIGN ORGANIZATION

SAK 1/24/82

COMMENTS

0033			
PFR NO. 2408-PPR-			
REVISION			

÷	all the mass on the axia as a result of the valve	ata point 5. The calculater of the mass is accounted for	lation is conservative because it the data point. Loadings on data in the dynamic analysis and there	efore not
	□ AGREE PF IS VALID  □ DISAGREE  BY: ####################################	agrel por	2-0033 is mvale 1/24/1/2 1/82 Ci Clenany	89.
D.	BECOMMENDATION BY FINDS	NGS REVIEW COMMITTEE		
	DEFINITION ADEQUACY:	ADEQUATE	INADEQUATE	
	VALIDITY:	D VALID	M INVALID	
	10 CFR 21:	- D NOT APPLICABLE	DAPPLICABLE SAK 1/24/82	•
	10 CRF 50.55(e):	O NOT APPLICABLE	D APPLICABLE	
	CLASSIFICATION:	O OBSERVATION	- FINDING	
	JUSTIFICATION:			
	CLASSIFICATION CRITER	ION NO. RESULTING IN "FIN	DING"	
	COMMENT ON "OBSERVA"	TION" CLASSIFICATION		
	•			.•
•	BY: S. L. Kou	DATE: 1/24/	182	

E. TPT PROJECT MANAGER

M ACCEPT

D REJECT

Allersman

1/24/82

•	08 PFR NO. 0034
	POTENTIAL FINDING REPORT REVISION
٠	SONGS 2&3 SEISMIC DESIGN VERIFICATION
A.	PREPARATION BY GA INITIATOR
	AFFECTED ITEMS: SCE Quality Assurance Procedure N18.04, Rev. 18 (11/23/81) and prior revisions - "OA Organization Audits - Scheduling, Planning, Performance, Documentation, and Follow-Up" REQUIREMENT REFERENCE DOCUMENTS:  10CFR50, Appendix B - Criterion 18 and Regulatory Guide 1.144 (Rev. 1, 9/80), with its endorsed ANSI/ASME N45.2.12-1977.
	BASIC REQUIREMENT: Appendix B requires that "A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine effectiveness of the program." ANSI/ASME N45.2.12-197. states: "The objectives of the audit system are: 3.2.3 to assess the effectiveness of the quality assurance program;"
	DESCRIPTION OF POTENTIAL FINDING:  SCE Quality Assurance Procedure N18.04 did not specify assessment of effectiveness of the quality assurance program as an audit objective. Consequently, QA audits concerned with seismic design output implementation might confirm compliance with established controls, for example, without determining effectiveness.
	PREPARED BY: 11. 1 Example DATE: 1/19/82
	REJECTION OF GA TASK LEADER COMMENTS BY: DATE:
	REJECTION OF ORIGINAL DESIGN ORG. COMMENTS BY: DATE:
В.	REVIEW BY GA TASK LEADER COMMENTS
υ.	THE VIEW OF GATASK ELADER
	MAGREE PF IS VALID BY SILVE DATE 1/19/32

D D A DATE \_\_\_\_ ☐ REQUEST RE-REVIEW BY \_\_\_ DATE \_\_\_\_\_ D DISAGREE BY \_\_\_\_\_ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: DATE: \_

2400-	PFH NU0034	_
	REVISION	

|--|

#### COMMENTS

QAP N18.04, Revision 18#(11/23/81), paragraph 5.4.5 requires that audit reports include a summary of audit results (i.e. an evaluation statement regarding the effectiveness of the quality assurance program.) Previous revisions did not include this provision.

AGREE PF 18 VALID EXCEPT. AS NOTED ABOVE

इंडिस्टर्स्य इ

BY: J. Mr. Curra

DATE: 1-21-82

COMMENDATION BY FINDINGS REVIEW COMMITTEE

FINITION ADEQUACY:

超 ADEQUATE

INADEQUATE

AUDITY:

Ø VALID

D INVALID

CLASSIFICATION:

OBSERVATION

S FINDING

JUSTIFICATION:

"CLASSIFICATION CRITERION NO. RESULTING IN "FINDING"

COMMENT ON "OBSERVATION" CLASSIFICATION

Y: 2. 2. 1 2046

DATE: 1/23/82

A PROJECT MANAGER

ACCEPT

RÉJECT

Y: Allereman DATE: 1/23/82

#### IMPACT ASSESSMENT

2408PFR NO. -0034

AFFECTED ITEM: SCE Quality Assurance Procedure N18.04

1. IS THERE THE POTENTIAL FOR REDUCING DESIGN MARGINS TO THE EXTENT DESIGN ALLOWABLES ARE EXCEEDED OR DESIGN REQUIREMENTS ARE NOT MET?

Not applicable

2. IS THERE THE POTENTIAL THAT THE ITEM MIGHT FAIL OR ENDANGER OTHER ITEMS DURING AN SSE?

Not applicable

COULD THE FAILURE OF THIS ITEM DURING AN SSE CREATE A SUBSTANTIAL SAFETY HAZARD?

Not applicable

- 4. COULD THE PROCEDURAL VIOLATION CREATE A SUBSTANTIAL SAFETY HAZARD?

  Conceivable. See Item 6, below.
- 5. ARE OTHER SIMILAR DEVIATIONS LIKELY TO EXIST?

  None were identified in the procedure review.
- 6. OTHER COMMENTS: QA audits performed to SCE QA Procedure requirements prior to 11/23/81 may have verified compliance with documented QA program requirements without assessing the effectiveness of the controls. The established controls may have been deficient or requirements may have been omitted. Conceivably, requirements for proper implementation of seismic design outputs may have been inadequate for effective control.

PREPARED BY: M. J. Sanard DATE: 1/22/82

**COMMENTS:** 

apre with above

BY: J. Breme

DATE: 1/23/8 2

# G. L. WESSMAN

JAN 2 6 1982

Southern California Edison Company

HILE COPY S Ø / VJ B

p. o. box boo 2244 walnut grove avenue Rosemead. California 91770 January 25, 1982

TELEPHONE {213} 572-2944

J, J, ADRIAN

MANAGER

GENERATION ENGINEERING

AND DESIGN

Mr. George L. Wessman, Project Manager Torrey Pines Technology P. O. Box 81608 San Diego, CA 92138

Dear Mr. Wessman:

Subject:

Independent Seismic Design Verification

San Onofre Nuclear Generating Station

Units 2 and 3

This is to advise you that in the rush of getting a response out to you we have inadvertently submitted a partial response on PFR 0034. Accordingly, we are retransmitting our response on the subject PFR to reflect the accurate and complete explanation on this item.

We apologize for the inconvenience.

Very truly yours,

Enclosures

		2408 PFR NO. 00	) J ¬
		INDING REPORT REVISION _ DESIGN VERIFICATION	<u>-</u>
Α.	PREPARATION BY GA INITIATOR		<u>.</u>
	AFFECTED ITEMS: SCE Quality Assurance Procrevisions - "QA Organization Audits - Schand Follow-Up" REQUIREMENT REFERENCE DOCUMENTS: 10CFR50, Appendix B - Criterion 18 and Re	eduling, Planning, Performance, Do	ocumentation,
	endorsed ANSI/ASME N45.2.12-1977.	guideory duried 1:111 (mott 1, 0, 0)	• <b>,</b>
	BASIC REQUIREMENT: Appendix B requires a periodic audits shall be carried out to assurance program and to determine effect states: "The objectives of the audit system quality assurance program;"	erify compliance with all aspects iveness of the program." ANSI/ASM	of the qualit E N45.2.12-197
	DESCRIPTION OF POTENTIAL FINDING:	•	·
•	SCE Quality Assurance Procedure N18.04 de the quality assurance program as an audit with seismic design output implementation controls, for example, without determining	objective. Consequently, QA aud might confirm compliance with es	its concerned
	PREPARED BY: M. J. Sanad D REJECTION OF GA TASK LEADER COMMENTS BY:	ATE: 1/19/82 DATE:	
	REJECTION OF ORIGINAL DESIGN ORG. COMMENTS	BY: DATE: _	
	REJECTION OF ORIGINAL DESIGN ORG. COMMENTS REVIEW BY GA TASK LEADER	COMMENTS	
	75.7 · · · · · · · · · · · · · · · · · · ·	COMMENTS	
	75.7 · · · · · · · · · · · · · · · · · · ·	COMMENTS	
	75.7 · · · · · · · · · · · · · · · · · · ·	COMMENTS	
	75.7 · · · · · · · · · · · · · · · · · · ·	COMMENTS	
	75.7 · · · · · · · · · · · · · · · · · · ·	COMMENTS	
	75.7 · · · · · · · · · · · · · · · · · · ·	COMMENTS	
	75.7 · · · · · · · · · · · · · · · · · · ·	COMMENTS	
	75.7 · · · · · · · · · · · · · · · · · · ·	COMMENTS  COMMENTS	
В.	75.7 · · · · · · · · · · · · · · · · · · ·	COMMENTS  DATE:  DATE:  COMMENTS	
В.	REVIEW BY GA TASK LEADER	COMMENTS  DATE	

DATE: \_

☐ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: \_

2408-	PFR NO0034	l	
	REVISION	•	

-		<u> </u>			
C.	REVIEW BY ORIGINAL DESIGN	ORGANIZATION	COMMENTS		
	audit reports in evaluation state	vision 18 (11/23/8) include a summary of the tement regarding the temperature of the temp	of audit resul ne effectivene	ts (i.e. an ss of the	es that
	■ AGREE PF IS VALID EXCE		•	ENT 1 FOR CON	MENTS.gr
D.	RECOMMENDATION BY FINDIN	GS REVIEW COMMITTEE			
	DEFINITION ADEQUACY:	□ ADEQUATE	□ INADEQUATE		
	VALIDITY:	□ VALID	☐ INVALID		·
	CLASSIFICATION:	□ OBSERVATION	□ FINDING		
	JUSTIFICATION:				
	,	ON NO. RESULTING IN "FIND	ING"		
	COMMENT ON "OBSERVATI	•		•	
*					
					<b>'</b> .
				•	
					·
		•	•		
÷	BY:	DATE:	i	,	
E.	GA PROJECT MANAGER				
	□ ACCEPT				:
	□ REJECT			•	
	- negety				
	•				
		·		··- ··· · · · · · · · · · · · · · · · ·	
	BY:	DATE:			•

RESPONSE TO POTENTIAL FINDING REPORT 0034

SAN ONOFRE UNITS 2 AND 3 SEISMIC DESIGN VERIFICATION.

The preliminary finding is presented in two parts:

- (1) Quality Assurance Organization procedure (N18.04 Rev. 17) does not specify, as an audit objective, an assessment of effectiveness of the quality assurance program.
- (2) As a consequence of (1) QAO audits concerned with seismic design output implementation might confirm compliance with established controls without determining the effectiveness of the quality assurance program.

The first part of the preliminary finding is directed to the written procedures of the SCE QA Organization and it is valid. Assessment of effectiveness was not stated as a specific, separate objective in the same manner as in ANSI N45.2.12. However, the QA Manual for Units 2 and 3 Chapter 18, Section 18.0.1 does—require a program effectiveness evaluation. The intent of the draft of ANSI N45.2.12 was first used by SCE in the development of procedures late in 1974. The standard was issued in 1977.

Prior to 1974 the SCE audit program was based on Appendix B to 10CFR50. That regulation requires the audit program "to verify compliance with all aspects of the quality assurance program" and to "determine the effectiveness of the program." Audit plans and reports of results in the period 1971-1973 do not indicate "assessment of effectiveness of the quality assurance program" as a specific, separate objective of the audit. However, a review of audit plans and reports in that period and later periods shows that effectiveness was examined by the auditor. This is documented by recommendations and requests for corrective action which reflect an assessment which went beyond a mere check of step-by-step compliance with established procedures.

RESPONSE TO POTENTIAL FINDING REPORT 0034 SONGS 2&3 SEISMIC DESIGN VERIFICATION

Page 2

The evolution of the audit program from 1971 to 1977 was concurrent with the general development of QA philosophy in the nuclear power industry. As might be expected, the number of findings which would be classified as "program omissions" versus the number which would be called "program noncompliances" was larger in that period. This reflects the thrust of the SCE audit program which measured effectiveness of the quality assurance program in all areas and recommended the strengthening of procedures where weakness was detected. As an example, Audit Report AE 4.0.2.3.0, which was performed in September, 1973 had an audit plan objective for document review of "determining for each documented reviewer the extent of review which took place." The recommended corrective action resulting from the audit included steps which were directed to improving and assuring Quality Assurance Fregram effectiveness.

The program requirement for a verification of "overall effectiveness of the Quality Assurance Program" has been clearly stated in Chapter 18 of the Project Quality Assurance Manual since the earliest issues and that intent has been carried out. QAO management has recognized that the wording of the standard and the regulation posed a possible need for a detailed procedural requirement to "assess effectiveness." One approach which was considered was to require the auditor to write a summary paragraph which would be an explicit assessment of effectiveness. This approach was not adopted because assessment of effectiveness is best accomplished by examining the output of persons performing safety related activities. Actual effectiveness was accomplished by verified corrective action.

RESPONSE TO POTENTIAL FINDING REPORT 0034 SONGS 2&3 SEISMIC DESIGN VERIFICATION

Page 3

Special audits and management reviews have been performed in areas where less than satisfactory effectiveness was detected. To maintain an overall assessment of effectiveness, a series of periodic reports is made to management. A weekly progress report is made by supervisors to the Manager, Quality Assurance; a summary review of Nonconformance Reports and Corrective Action Requests is performed quarterly. Results of the review and corrective action to correct any adverse quality trends are reported by supervisors to the Manager, Quality Assurance. In addition, a quarterly report to higher management maintains visibility of trends and allows management to assess the effectiveness of the program. Procedural requirements for this series of reports are given in QAP's: N2.02, N2.06 and N2.07.

On a yearly basis (approximately), the Manager, Quality Assurance has employed independent consultants to assess the effectiveness of the Quality Assurance Organization.

The second part of the preliminary finding poses the possibility that, as a consequence of the lack of a specifically stated objective in the Quality Assurance Organization Procedure, SCE auditors may not have assessed the effectiveness of the quality assurance program in the area of seismic design. That possibility can be evaluated by a review of audits performed and corrective actions accomplished. QAP N18.04, paragraph 5.1.5(c), states that regularly scheduled audits may be supplemented by special audits when an independent assessment of program effectiveness is considered necessary. When the regular audits indicated a weakness in effectiveness, special audits were performed. One form of special audit which was widely used in the area of design activity is the joint audit. Joint audit teams are composed

FESPONSE TO FOTENTIAL FINDING REPORT 0034 SONGS 2&3 SEISMIC LESIGN VERIFICATION

Page 4

of qualified auditors from the QA Organization and technical specialists from other SCE organizations such as Design Engineering. Coordination of audit planning, performance and reporting is done by a Lead QA Auditor. The QAO members of audit teams assist technical specialists in conducting a detailed audit of the results of an activity such as design. A total of nine such joint audits were performed in the Bechtel Design Office during the period in question. The reports and verified corrective actions from these audits document the fact that SCE QAO did assess the effectiveness of the quality assurance program.

M. CURRAN

Manager, Quality Assurance

1-25-82

PFR	NO	2498-PFR-0039

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

	S S S S S S S S S S S S S S S S S S S
A. PREPARATION BY GA INITIATOR	
AFFECTED ITEMS: I&C Equipment Field Mourand Drawings for 2LT-0312 and Associated I Mounting Stand and Plate. REQUIREMENT REFERENCE DOCUMENTS:	nting Design - Installation and Applicable Detai Devices - Calculations for Seismic Category I
Not Applicable	
BASIC REQUIREMENT:	
Not Applicable	
tension bolt value and the slip coefficier On Calculation Sheet 25 the value of the sbut the reference source (IOM Calculation this value was not provided.	stiffness of concrete expansion anchor was given No. C-258-7.04, Sheet No. 169) which contains ct moment of inertia for the support stand shoul DATE:  DATE:
B. REVIEW BY GA TASK LEADER	COMMENTS
Re-review requested obtained from BPC	
with results showing that the values used a	on BPC on 1/22/82 was neviewed for Items   and 2 in the calculation were reasonable.
On Item 3 above, BPC admits using	a lighter section (I=17.31N4) in the calculation but

on the overall results of the analysis since using a smaller structual section results in a more conservative assumption for the natural frequency computation.

☐ DISAGREE BY \_\_\_\_\_ DATE \_

☐ REVIEW OF ORIGINAL DESIGN ORGS. COMMENTS BY: \_\_\_\_\_

☐ AGREE PF IS VALID

REQUEST RE-REVIEW

DATE: \_\_\_\_\_

PFR NO	FR-0039
REVISION	

C.	ŘEVIEW BY ORIGINAL DESI	ON ORGANIZATION	COMMENTS		_
	•				
	•				
	☐ AGREE PF IS VALID			· ·	
	☐ DISAGREE		•		
				,	
	BY:	DATE:			
D.	RECOMMENDATION BY FINE	DINGS REVIEW COMMITTEE			
	DEFINITION ADEQUACY:	<b>⊠</b> ADEQUATE	□ INADEQUATE	•	
	VALIDITY:	□ VALID	X INVALID		
	CLASSIFICATION:	□ OBSERVATION	☐ FINDING		
•	JUSTIFICATION:				
	CLASSIFICATION CRITER	RION NO. RESULTING IN "FI	NDING"		
	COMMENT ON "OBSERVA	ATION" CLASSIFICATION			
				•••	
	0 1 1			•	
	BY: S. A. Kon	DATE: 1/24	<u>/</u> 82	,	
E.	GA PROJECT MANAGER				
	M ACCEPT				
	□ REJECT				
	4 - 4				
				Z	
	U11.1		·	•	
	BY: Alluma	m DATE: 1/24/8	72		

PER NO	2408-PFR-0041
PERMI	2700 111 0011

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

	·
A.	PREPARATION BY GA INITIATOR

I&C Equipment Field Mounting Design - Installation and Applicable AFFECTED ITEMS: Details and Drawings for 2LT-0312 and Associated Devices - Calculations for Seismic Category I Mounting Stand and Plate.

REQUIREMENT REFERENCE DOCUMENTS:

Not Applicable

**BASIC REQUIREMENT:** 

Not Applicable

B.

DESCRIPTION OF POTENTIAL FINDING:

No reference sources or data sheets were given for the weight of instruments and associated tubing, valves, and plates on Sheets 19, 20 and 21.

PREPARED BY: D. Tow W. Yow DATE: 1-2	20-82
REJECTION OF GA TASK LEADER COMMENTS BY:	DATE:
REJECTION OF ORIGINAL DESIGN ORG. COMMENTS BY:	DATE:
REVIEW BY GA TASK LEADER	COMMENTS

A simple cheek, e.g. taking a waterial weight take- of g the plate, brackets, and tubing shown an drawings, appear to confirm reasonableness of weights and loads used in design.

Re-neview of the weight values from the additional documents obtained from BPC

on 1/22/82 showed that Therefore, this PFR of  AGREE PF IS VALID  REQUEST RE-REVIEW  DISAGREE	BY DATE DATE DATE	1/23/3 ~
☐ REVIEW OF ORIGINAL DE	SIGN ORGS. COMMENTS BY:	DATE:

PFR NO	2408-PFR-0041			
REVISION				

C.	REVIEW BY ORIGINAL DESIGN ORGANIZATION		COMMENTS			
		•	·			
	·	·				
<i>,</i>						
	☐ AGREE PF IS VALID					
	□ DISAGREE			. •		
	BY:	DATE:	····			
D.	RECOMMENDATION BY FINDINGS REVIEW COMMITTEE					
	DEFINITION ADEQUACY:		☐ INADEQUATE	•	-	
	VALIDITY:	□ VALID	X INVALID			
	CLASSIFICATION:	OBSERVATION	FINDING			
	JUSTIFICATION:					
	CLASSIFICATION CRITERION NO. RESULTING IN "FINDING"					
	COMMENT ON "OBSERVAT	ION" CLASSIFICATION				
		•	`			
		•				
			·			
	0 / / /	ı				
	BY: S. A. Kou	h DATE: 1/24	1/82		·	
Ε.	GA PROJECT MANAGER					
	☑ ACCEPT		•			
	□ REJECT					
					<u> </u>	
			* .			
	RV. Shiller man	L DATE 1/24/	, 82	•		