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USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

84 JUN 15 11:09

DOCKETING & SERVICE
BRANCH

In the Matter of)	
)	
PACIFIC GAS AND ELECTRIC COMPANY)	Docket Nos. 50-275 O.L.
)	50-323 O.L.
(Diablo Canyon Nuclear Power)	
Plant, Units 1 and 2))	

ERRATA TO JUNE 11, 1984 REPLY

In the Joint Intervenors' Reply to PGandE and NRC Staff Responses to Motions Regarding Design Quality Assurance, Construction Quality Assurance, and Licensee Character and Competence, filed yesterday, please note the following corrections:

1. At p. 11, after line 12, insert:

(.1) Attachment 2 -- Harold Hudson -- Reply to NRC Inspection Report No. 83-37 and PGandE responses concerning the adequacy of Pullman's quality assurance program, compliance with Appendix B for pipe supports and rupture restraints, audits, training of personnel, welder certification, welding quality, intimidation and harassment, and minimum valve wall thickness deficiencies.

8406150333 840612
PDR ADOCK 05000275
G PDR

DS03

2. At Exhibit 2 (Stokes Affidavit), add the attachments enclosed herewith.

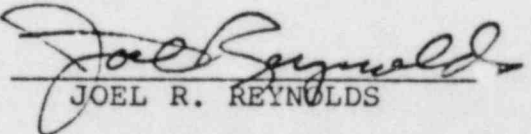
Dated: June 12, 1984

Respectfully submitted,

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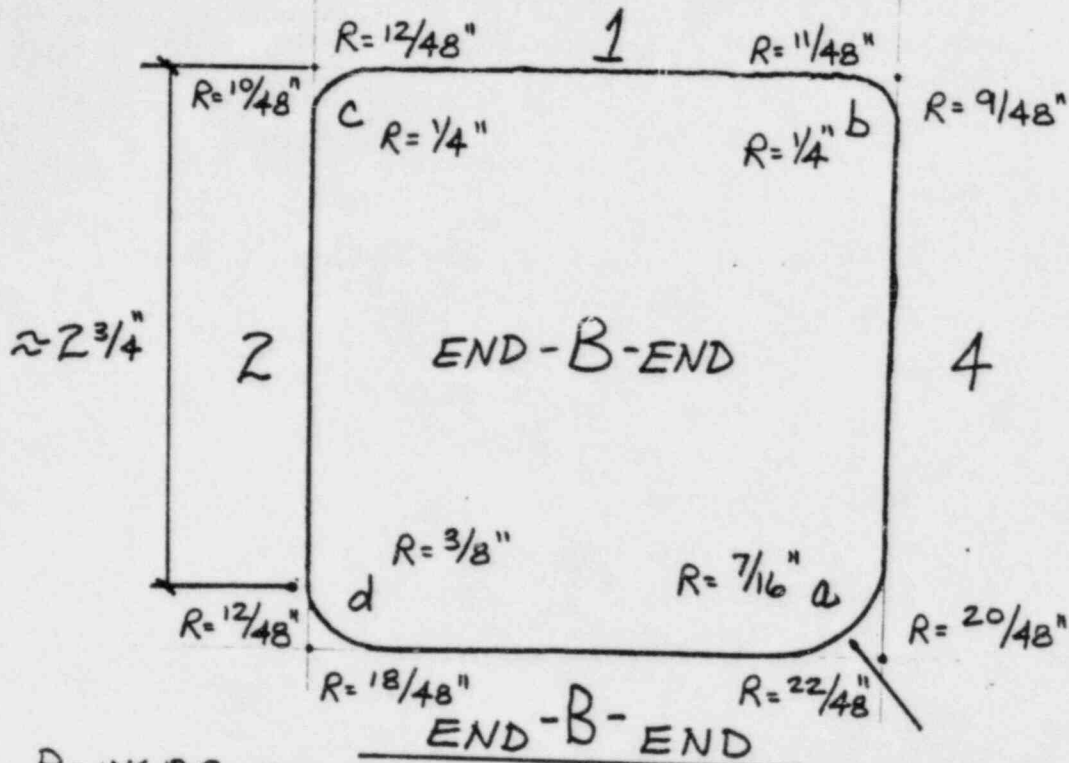
By


JOEL R. REYNOLDS

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SCENIC SHORELINE PRESERVATION
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ATTACHMENT 1



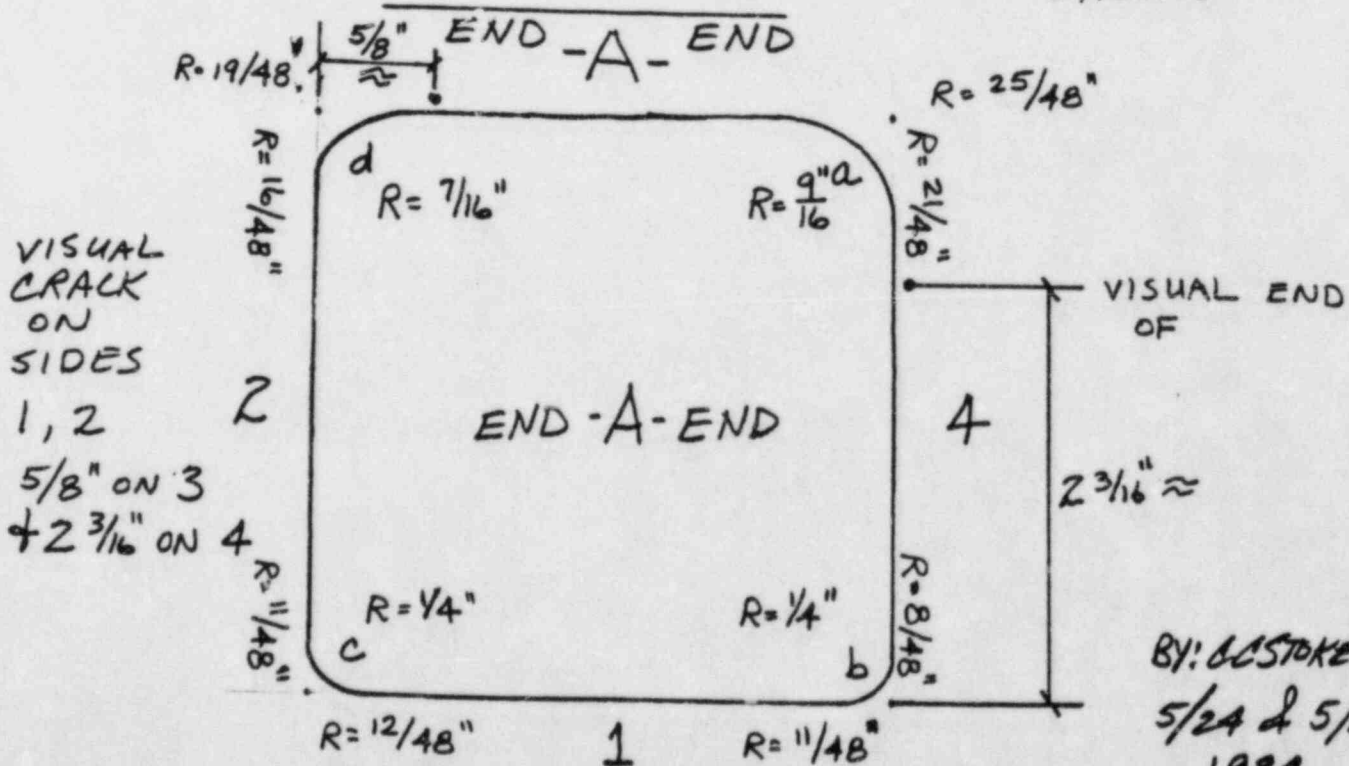
R - INSIDE MEASURED
W/FILLET GAUGES

$$\text{IF } R = 2t = 2\left(\frac{1}{4}\right) = \frac{1}{2}'' = \frac{24}{48}''$$

NO.
PO 14817
ON TS 3" X 3" X 1/4"

SIDE 3

OUTSIDE
OF
TUBE
SHOWN



BY: GUSTOKES
5/24 & 5/25
1984

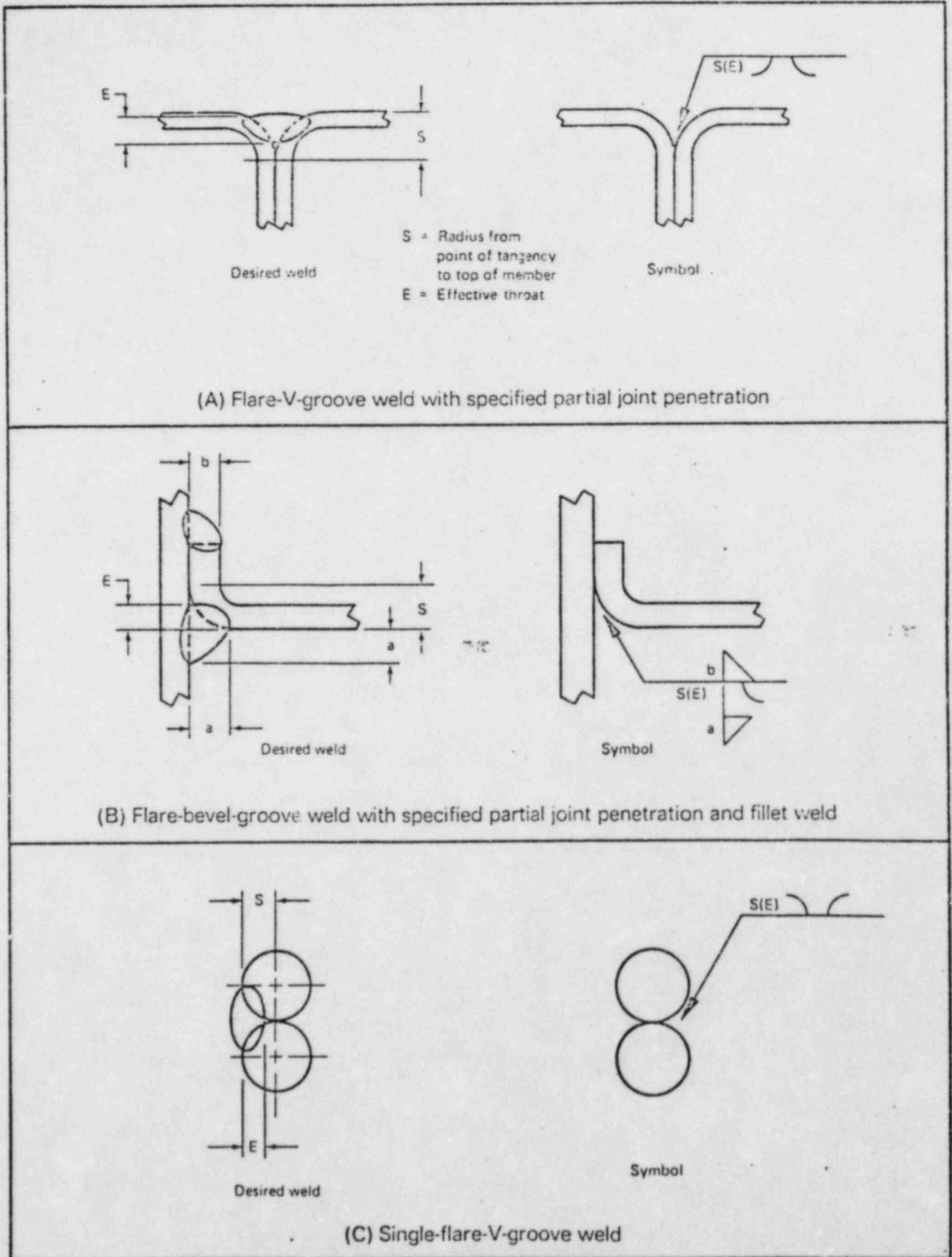


Fig. 32—Application of flare-bevel- and flare-V-groove weld symbols

ATTACHMENT 2, b

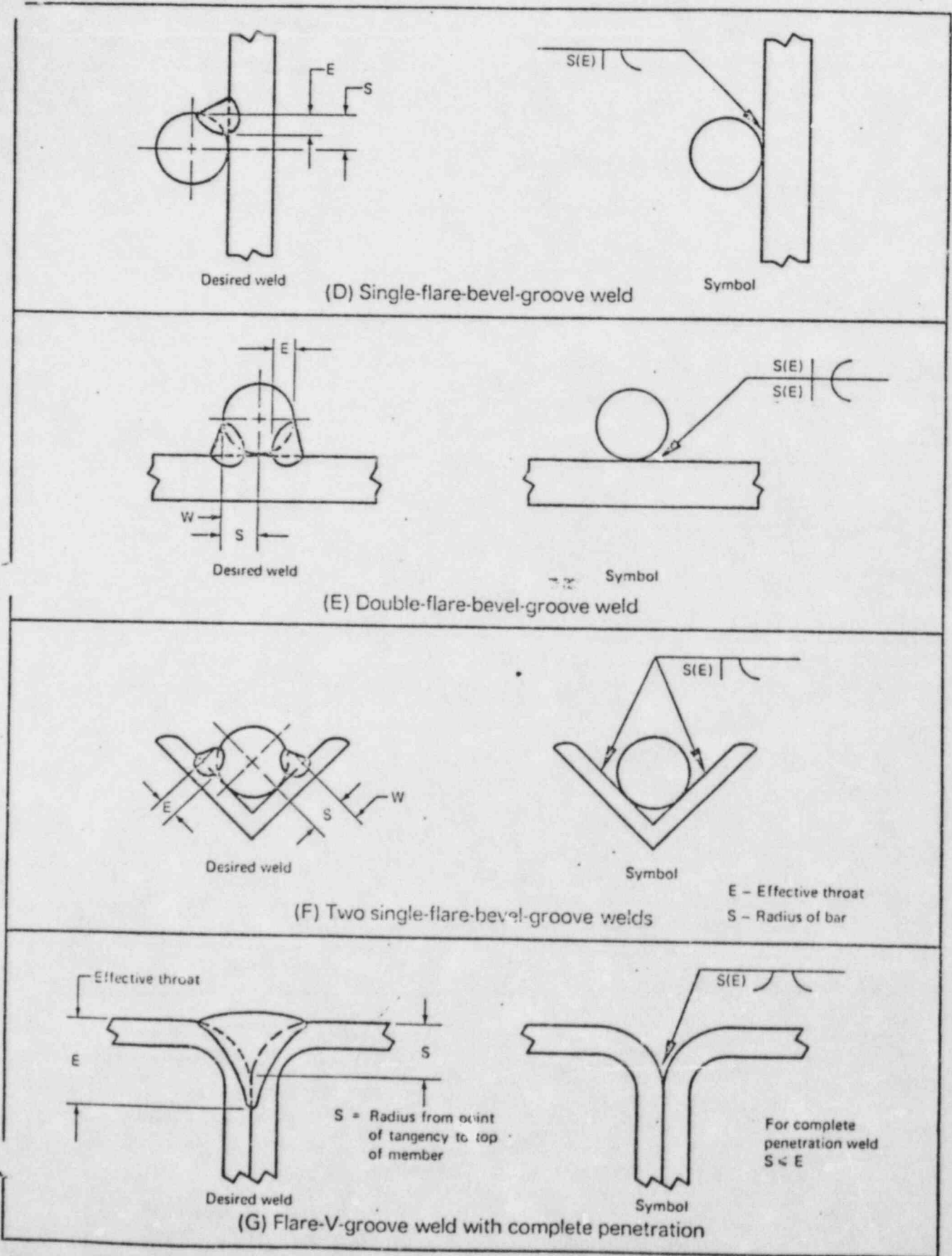


Fig. 32 (cont.)—Application of flare-bevel- and flare-V-groove weld symbols

A-ATTACHMENT 3A

PACIFIC GAS AND ELECTRIC COMPANY

SHEET NO. _____ OF _____ SHEETS

GENERAL COMPUTATION SHEET

JOB FILE] - NO. _____
LOCATION _____

SUBJECT LOADING CASES FOR HGR. No.
DIABLO CANYON UNIT

MADE BY _____ DATE _____ CHECKED BY _____ APPROVED BY _____

HANGER No. _____ REV. _____
LINE No. _____
ANALYSIS No. _____ REV. _____
DATA POINT _____

SER	_____	REV	_____
SE	_____	JP	_____

LOAD CASES	FX (lb.)	FY (lb.)	FZ (lb)	MX (IN-lb.)	MY (IN-lb.)	MZ (IN-lb.)
<u>1 A</u>						
<u>1 B</u>						
<u>2 A</u>						
<u>2 B</u>						
<u>3 A</u>						
<u>3 B</u>						
<u>4 A</u>						
<u>4 B</u>						
<u>5 A</u>						
<u>5 B</u>						

CASE LOADING

1. A & B : TH+DL+ FL
2. A : TH+DL+ FV+RVOT+(DE²+SAM²) 1/2
2. B : TH+DL+ FV+RVOT-(DE²+SAM²) 1/2
3. A : TH+DL+ FV+RVOT+(DD E²+SAM²) 1/2
3. B : TH+DL+ FV+RVOT-(DD E²+SAM²) 1/2
4. A : DL+(HOS²+SAM²) 1/2
4. B : DL-(HOS²+SAM²) 1/2
5. A : TH+DL+(HOS²+SAM²) 1/2
5. B : TH+DL-(HOS²+SAM²) 1/2

NOTE

1. FRICTION LOADS REF DCM-M9 (4.2H)
2. THE DIRECTION OF THE THERMAL FORCE SHALL NOT BE USED TO REDUCE THE MAGNITUDE OF THE COMBINED LOADS.
3. FOR LOAD CASES 3 AND 5 USE THE GREATER OF TH OR THA.
4. CASE 5 FOR ANCHOR BOLTS ONLY.

GENERAL COMPUTATION

36

JOB FILE NO. _____

LOCATION AREA: _____

ELEV.: _____

SUBJECT HGR. No. -
DIABLO CANYON UNIT NO.

ISO. No. - _____

MADE BY _____ DATE 1/83 CHECKED BY _____ APPROVED BY _____

LOAD CASE DETERMINATION PER M-9

LOADS
 Global
 Local

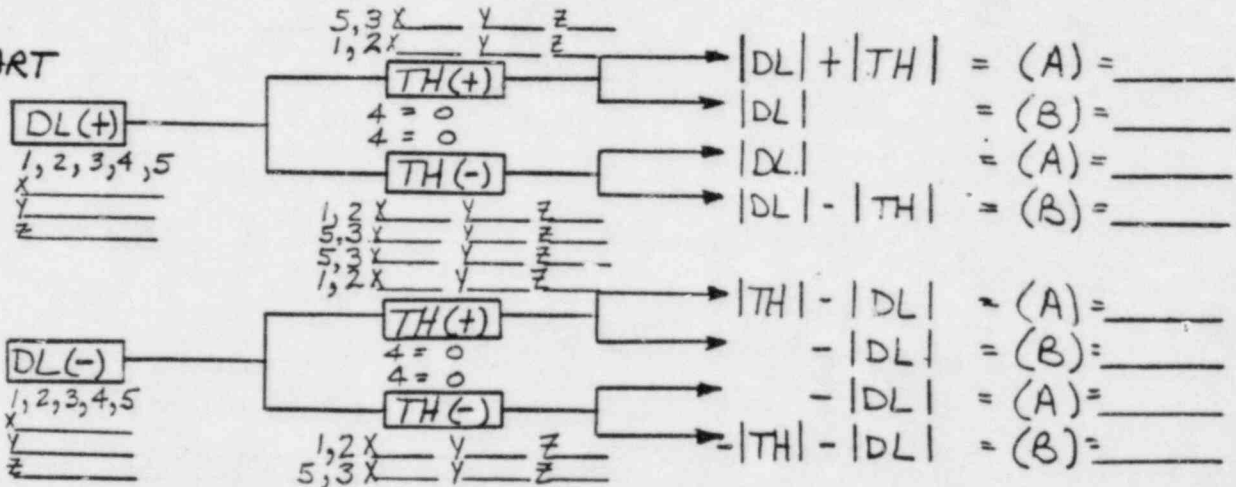
SEQ _____ REV _____
SH _____ OF _____

LINE NO. _____
ANALYSIS NO. _____ DATA POINT _____ REV. _____ DATE 1/1

ACCELERATION PEAK ME 101 UNITS -- FORCE _____
VALUES 15 HZ M-40 CALC MOMENT _____

FLOW CHART

FOR HANDLING DL + TH LOADS



LOAD CASES	Fx	Fy	Fz	Mx	My	Mz
1.a. (A) + FL	/	/	/	/	/	/
1.b. (B) - FL	/	/	/	/	/	/
2.a. (A) + FV + Rvot + (DE)	/	/	/	/	/	/
2.b. (B) - FV - Rvot - (DE)	/	/	/	/	/	/
* 3.a. (A) + FV + Rvot + (DDE)	/	/	/	/	/	/
* 3.b. (B) - FV - Rvot - (DDE)	/	/	/	/	/	/
* * 4.a. (A) + (HOS)	/	/	/	/	/	/
* * 4.b. (B) - (HOS)	/	/	/	/	/	/
* 5.a. (A) + (HOS)	/	/	/	/	/	/
* 5.b. (B) - (HOS)	/	/	/	/	/	/

$(DE) = (DE^2 + SAMDE^2)^{1/2}$
 $(DDE) = (DDE^2 + SAMDE^2)^{1/2}$
 $(HOS) = (HOS^2 + SAMHOS^2)^{1/2}$

$FL = ((A) \text{ OR } (B)) \text{ MAX } \left\{ \begin{matrix} .3 \text{ STEEL} \\ .07 \text{ TEFLON} \end{matrix} \right\}$
 IF MOVEMENT > .0625 IN.

* USE (TH OR THA) MAX IN FLOW CHART TO OBTAIN (A), (B)
 * * USE TH = 0 ZERO THIS CASE ONLY

GENERAL COMPUTATION

30

JOB FILE } NO. _____
 LOCATION AREAS
 ELEV. : _____

SUBJECT HGR. NO. -
DIABLO CANYON UNIT NO.

MADE BY _____ DATE 1/1 CHECKED BY _____ APPROVED BY _____

MAX. LOAD COMBINATION CALC. PER M-9

GLOBAL LDS.
 LOCAL LDS.

SEQ _____	REV _____
SH _____	OF _____

LINE NO. _____

ANALYSIS NO. _____ DATA POINT _____ REV. _____ DATE _____

ACCELERATION PEAK ME 101... UNIT FORCE _____
 VALUES 15HZ M-40 CALC. MOMENT _____

LOAD COMBINATION	FX	FY	FZ	MX	MY	MZ
1. TH+DL+FL	A					
	B					
2. TH+DL+PV+Rvot +(DE ² + SAMDE ²) ^{1/2}	A					
	B					
3. TH or THA +DL+PV+Rvot +(DDE ² + SAMDDE ²) ^{1/2}	A					
	B					
4. DL+(HOS ² + SAMHOS ²) ^{1/2}	A					
	B					
5. ANCHOR BOLT CALC. TH or THA + CASE 4	A					
	B					
6. ADJ. FACTOR K = $\frac{\text{COMB 3 or 4 (LAR.)}}{\text{COMB 1 or 2 (LAR.)}}$ IF K > 1.33 ADJ.LOAD = (3 or 4) IF K < 1.33 ADJ.LOAD = 1 of 3 ³ 2	K = A					
	K = B					
7. STRUCT. WT.				X	X	X
8. ADJ. FACTOR L = $\frac{\text{ACC.DDE or HOS (LAR.)}}{\text{ACC. DE}}$ IF L > 1.33 ADJ.ACC. = (DDE or HOS) IF L < 1.33 ADJ.ACC. = DE	L = ADJ. ACC:	L = ADJ. ACC:	L = ADJ. ACC:	X-ACC: DE DDE HOS	Y-ACC: DE DDE HOS	Z-ACC: DE DDE HOS
9. STRUCT. WT. x ADJ. ACC. (8)				X	X	X
10. TRIB. or EFF. WT.				X	X	X
11. FRAME DESIGN LOAD = 6 + 9 + 7-Y only	A					
	B					
12. FREQ. DESIGN LOAD = 7 + 10	A					
	B					
13. ANCHOR BOLT DESIGN LOAD = (5 or 6) MAX. + 9 + 7-Y ONLY	A					
	B					

FL = FRICTION FRIC. COEFF. = .3 STEEL ; .07 TEFLON

USE ALLOW. STRESS FOR CASE 1 or 2

Fb 1-DIR. PL. = 23.9 ksi

AISC STEEL - Fa, Fb, Fb 2-DIR. PL = 19.1 ksi

Fv = 12.8 ksi WELD = 18.0 ksi

DIABLO CANYON NUCLEAR POWER PLANT UNIT _____ HANGER NO. _____

MADE BY: _____ DATE _____ CALC. SEQ. NO. _____ REV. _____

CHECKED BY: _____ DATE _____

APPROVED BY: _____ DATE _____ ATTACHMENT 4A

CHECKLIST FOR STRUDL FRAME ANALYSIS

1. MEMBERS

DOES THIS FRAME INCLUDE ANGLES

YES NO N/A PAGE

ANGLE PROPERTIES INCORPORATE PRINCIPAL AXES

ANGLE PROPERTIES INCORPORATE ORTHOGONAL AXES

L/t FOR ANGLES HAS BEEN REVIEWED

SLENDERNESS RATIOS HAVE BEEN REVIEWED

LENGTHS MODIFIED FOR COMPRESSION MEMBERS WITH

INTERMEDIATE JOINTS

TORSION MEMBERS ARE ACCEPTABLE BY ENGINEERING JUDGEMENT,

OR FOR CALCULATIONS SEE _____

2. NATURAL FREQUENCY

DIRECTION	f_n	ALLOWABLE	RESTRAINED	UNRESTRAINED
X	= _____ cps	_____ cps	<input type="checkbox"/>	<input type="checkbox"/>
Y	= _____ cps	_____ cps	<input type="checkbox"/>	<input type="checkbox"/>
Z	= _____ cps	_____ cps	<input type="checkbox"/>	<input type="checkbox"/>

ATTACHMENT 4B

PACIFIC GAS AND ELECTRIC COMPANY

GENERAL COMPUTATION SHEET

HGR. NO. _____

SEQ. NO.- _____

Rev. _____

DIABLO CANYON UNIT NO. _____

ISO. NO.- _____

DATE / / CHECKED BY _____ APPROVED BY _____

Check combined stress and deflection				
Units: <input type="checkbox"/> Installed support		Support Loading Condition		
Lbs., In. <input type="checkbox"/> Not installed support		<input type="checkbox"/> A/B	<input type="checkbox"/> C/D	<input type="checkbox"/> T <input type="checkbox"/> C/D <input type="checkbox"/> T
Ref.	Description	Line No.	Span No. / Joint No.	
	Stress bending MY/SM	(1)		
	Stress bending MZ/SM	(2)		
	Stress axial P/A	(3)		
	Force local FY	(4)		
	Force local FZ	(5)		
	Span length L	(6)		
Shear 1	Stress Tors. & warp. shear	(7)		
	Warping normal stress	(8)		
AISC	Column ratio K	(9)		
	Radius of gyr. r	(10)		
	Shear area. Local Ay	(11)		
	Shear area. Local Az	(12)		
	$\frac{(9) \times (6)}{(10)}$	(13)		
	Allow. compr. stress Fa	(14)		
	Allow bend. stress Fby	(15)		
	Allow bend. stress Fbz	(16)		
Allow shear stress Fv	(17)			
Shear	$\frac{(4)}{(11)} + \frac{(5)}{(12)} + (7)$	(18)		
Compr. Ratio	$\frac{(3)}{(14)}$	(19)		
Enter O.K. if	$18 \leq 17 < .6$	(20)		
Axial & Bending	$\frac{(1)}{(15)} + \frac{(2)}{(16)} + \frac{(8)}{(16)} + (19)$	(21)		
Enter O.K. if	ϕ Allow * $(21) \leq \phi$ Allow			
Max.	Max. deflection at joint _____ in the restrained direction is _____ ok.			
If (19) > .15 resolve on separate calc. sheet using AISC formulas 1.6-1a & b. If (20) > .6, prorate (15) and (16) per AISC section 1.10.7				

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