



FAX Transmission

From:

MEGAN E. BIANCHETTI

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To: Harold Gray

Company: US NRC

Fax Phone: 610.337.5320

Date: 08.07.03

Time: 9:24am

Pages: 2 (including this one)

Message:

From Russell Stein.

132825

NMSS/RGNI MATERIALS-002

*"Value through Excellence"*

215-723-7284 FAX: 215-723-9115

WWW.CHLSYSTEMS.COM

To:	Harold Gray, cc: Sharon Turner, Russell Stein
Company:	NRC
Phone:	
Fax:	(610) 337-5320 (215) 529-6514 (973) 398-8310
From:	Rick Keiper (215-723-7284)
Date:	8-7-03
Pages (incl. cover):	2

Message:

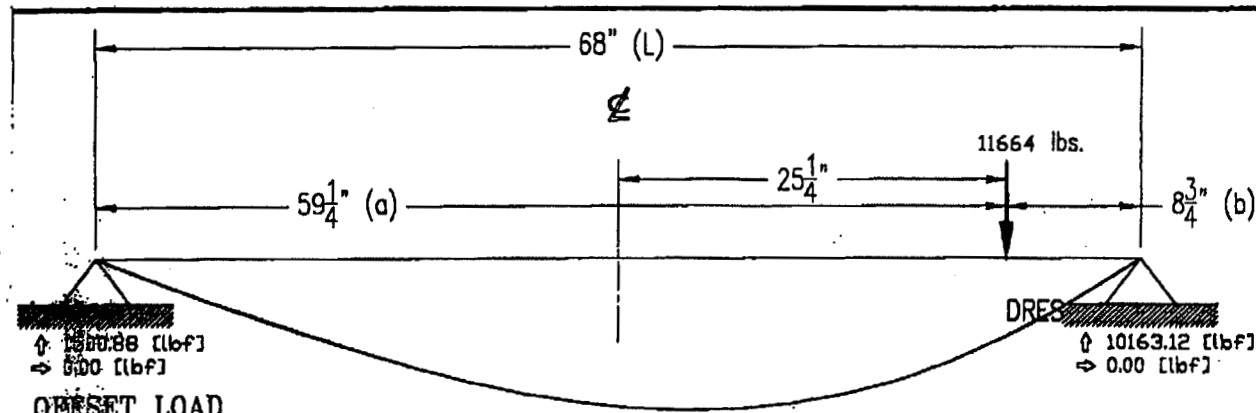
Harold,

Here is the calculation sheet showing the load carrying capacity of the lock bar for the two scenarios we discussed in our meeting yesterday.

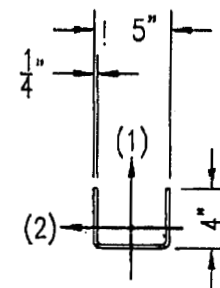
The figures presented in the meeting were based on conservative approximations. These calculations use the actual material strength of the bar and use the actual moment of inertia of the bar instead of approximations. Because of that the actual load carrying capacities are higher than the approximate numbers that were presented at the meeting.

Rick Keiper

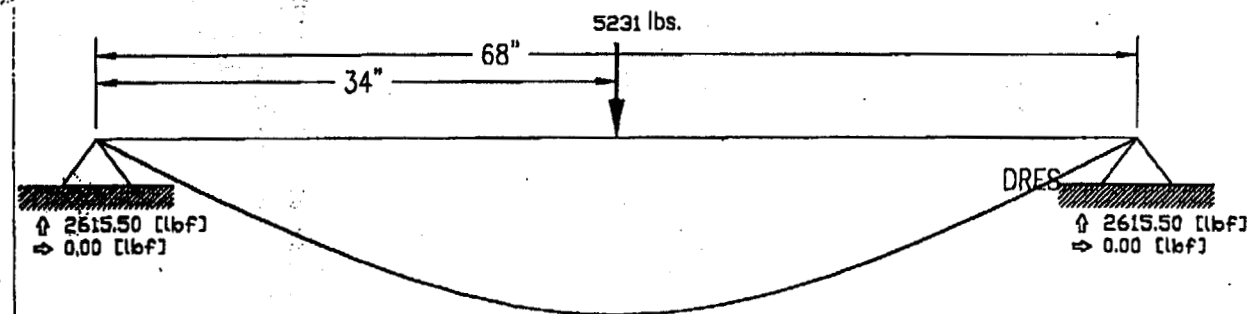
Sr. Engr.
CHL Systems, Inc.



MOMENT OF INERTIA I1	[INCH ⁴]	12.706
MOMENT OF INERTIA I2	[INCH ⁴]	5.069
MOMENT OF INERTIA I EFF	[INCH ⁴]	5.0690
MAX. BORDER DIST.	[INCH]	2.642
STRETCH LIMITS		
E-MODULUS	[PSI]	46350
MATERIAL		304 S/S
MAX.DEFLECTION D1	[INCH]	0.200851
MAX.BENDING MOMENT MB1	[LBF IN]	88927.
MAX.DEFLECTION D2	[INCH]	0
MAX.BENDING MOMENT MB2	[LBF IN]	0
MAX.STRESS RES.	[PSI]	46349.
MAX.DEFLECTION DRES	[INCH]	0.200851
MAX.BENDING MOMENT MBRES	[LBF IN]	88927.
SCALE FOR DEFL. LINE		50:1
SCALE FOR BENDING MOM. LINE		



X-SECTION PROP.	
I1 [INCH ⁴]	12.706
I2 [INCH ⁴]	5.069
Sx [INCH]	1.3588
Sy [INCH]	2.642
A [INCH ²]	3.044



MOMENT OF INERTIA I1	[INCH ⁴]	12.706
MOMENT OF INERTIA I2	[INCH ⁴]	5.069
MOMENT OF INERTIA I EFF	[INCH ⁴]	5.0690
MAX. BORDER DIST.	[INCH]	2.642
STRETCH LIMITS		
E-MODULUS	[PSI]	46350
MATERIAL		304 SS
MAX.DEFLECTION D1	[INCH]	0.233104
MAX.BENDING MOMENT MB1	[LBF IN]	88927
MAX.DEFLECTION D2	[INCH]	0
MAX.BENDING MOMENT MB2	[LBF IN]	0
MAX.STRESS RES.	[PSI]	46349.
MAX.DEFLECTION DRES	[INCH]	0.233104
MAX.BENDING MOMENT MBRES	[LBF IN]	88927
SCALE FOR DEFL. LINE		50:1
SCALE FOR BENDING MOM. LINE		

Max. Load =	$\frac{4Y_{yield}I_2}{LS}$
Max. Stress =	$\frac{Mc}{I_2} = \frac{PLS_1}{4I_2}$
Y _{yield}	: Material Yield Strength/ Stretch Limit (PSI)
I ₂	: Moment of Inertia about axis 2 (in. ⁴)
L	: Beam Length (in.)
S ₁	: Distant from neutral axis to outside edge of bar (in.)
P	: Max load (lbs.)

IDENTIFICATION		DATE		
Drawn	T.L.	08-06-03		
Engineer	T.L.	08-06-03		
Approved				
Checked				
Issued				
			Customer	GRAY*STAR, Inc.
			Ref. Dwg.	
			Job Number	33248
			Size	A
			P.	
			Scale	
			Unless Noted Otherwise	
			Sheet	1 OF 1

CLAYTON H. LANDIS COMPANY INC.
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THE GENESIS I IRRADIATOR
PART 33248-205-242
STRUCTURE ANALYSIS

Dwg. No.
33248-205-242-001

Rev.
1

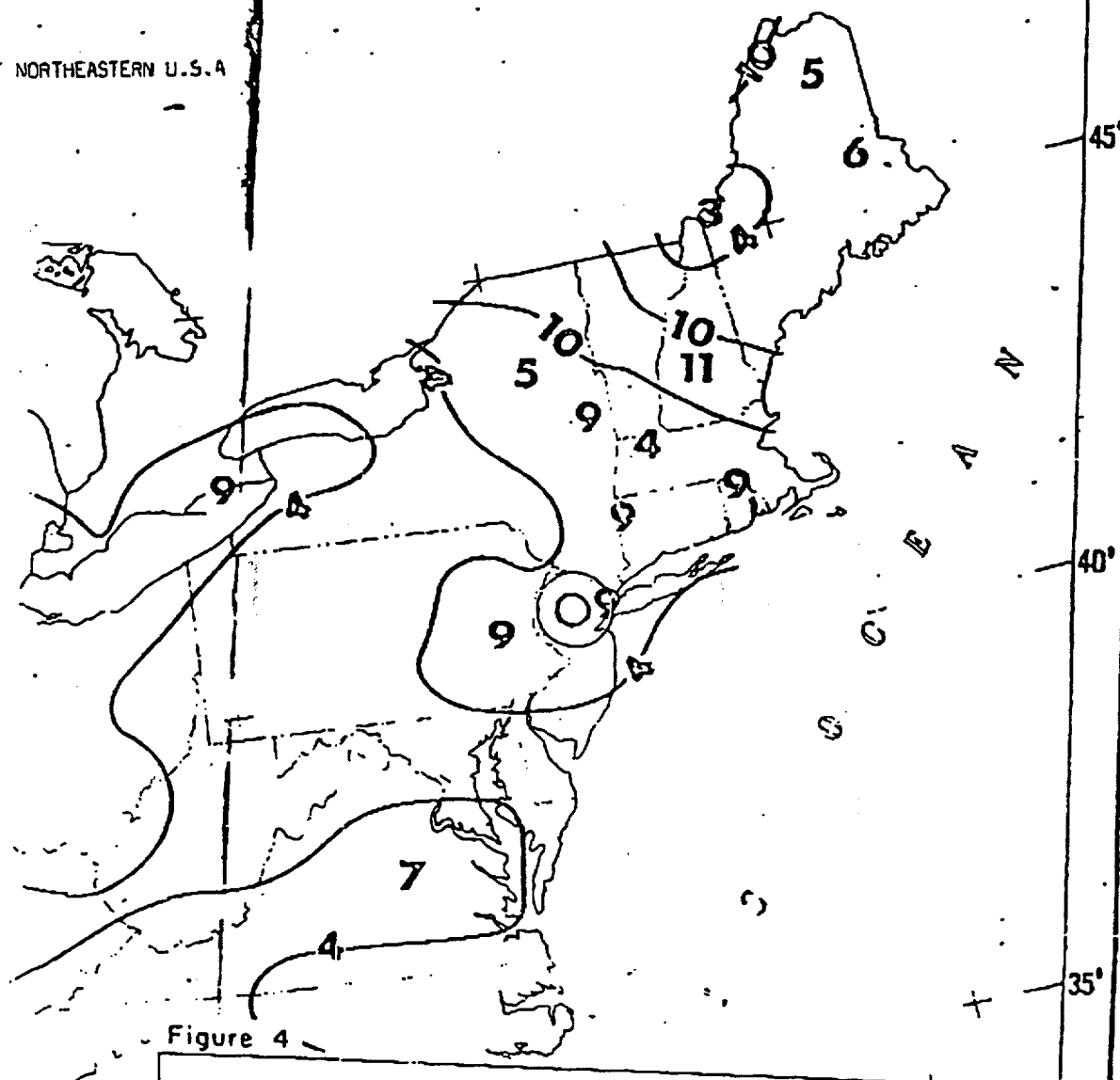


Figure 4

Preliminary Map of
Horizontal Acceleration (Expressed As Percent Of
Gravity) In Rock With 90 Percent Probability
Of Not Being Exceeded In 50 Years

The Maximum Acceleration Within The 60 Percent Contour Along The
San Andreas And Garlock Faults In California Is 80 Percent Of g .
(Using The Attenuation Curves Of Schnabel And Seed, 1973)

U.S. Geological Survey Open-File Report 76-416, 1976

This Report Is Preliminary And Has Not Been Edited Or Reviewed For Conformity With U.S. Geological Survey Standards

MAP 2

