

116  
4/7

CYGNA	1/12
JOB NO.:	84042
DATE LOGGED:	6/7/84
LOG NO.:	#116 (4/7)
FILE:	11.1 Tech. Files
CROSS REF. FILE	11.1 Tech. Files log

FFB-3R

# REFINED RESPONSE SPECTRA FOR

## FUEL BUILDING

### COMANCHE PEAK STEAM ELECTRIC STATION NUCLEAR POWER PLANT

8411060469 840620  
PDR ADCK 05000445  
A PDR

## GIBBS & HILL

## RECEIVED DECEMBER '82

JUN 7 1984

CYGNA - SAN FRANCISCO

## CPSES

### REFINED RESPONSE SPECTRA FOR FUEL BUILDING

Presented herewith are the refined floor response spectra for the Fuel Building (references 2 and 3) based on existing response spectra (reference 1) and developed primarily for as-built piping analysis. These response spectra have been refined based upon improved curve smoothing techniques by use of computer, instead of by hand. Therefore, undue hand smoothing and digitizing have been eliminated. Also, improved interpolation has been used at lumped masses based on time history responses. The results are plotted in terms of accelerations versus frequencies for ease of use.

The results are presented in figures 433-B through 444-B and 409-B through 420-B which are summarized in Table nos. 2 and 3. Also the digitized values of the same spectra are included at the end of the book.

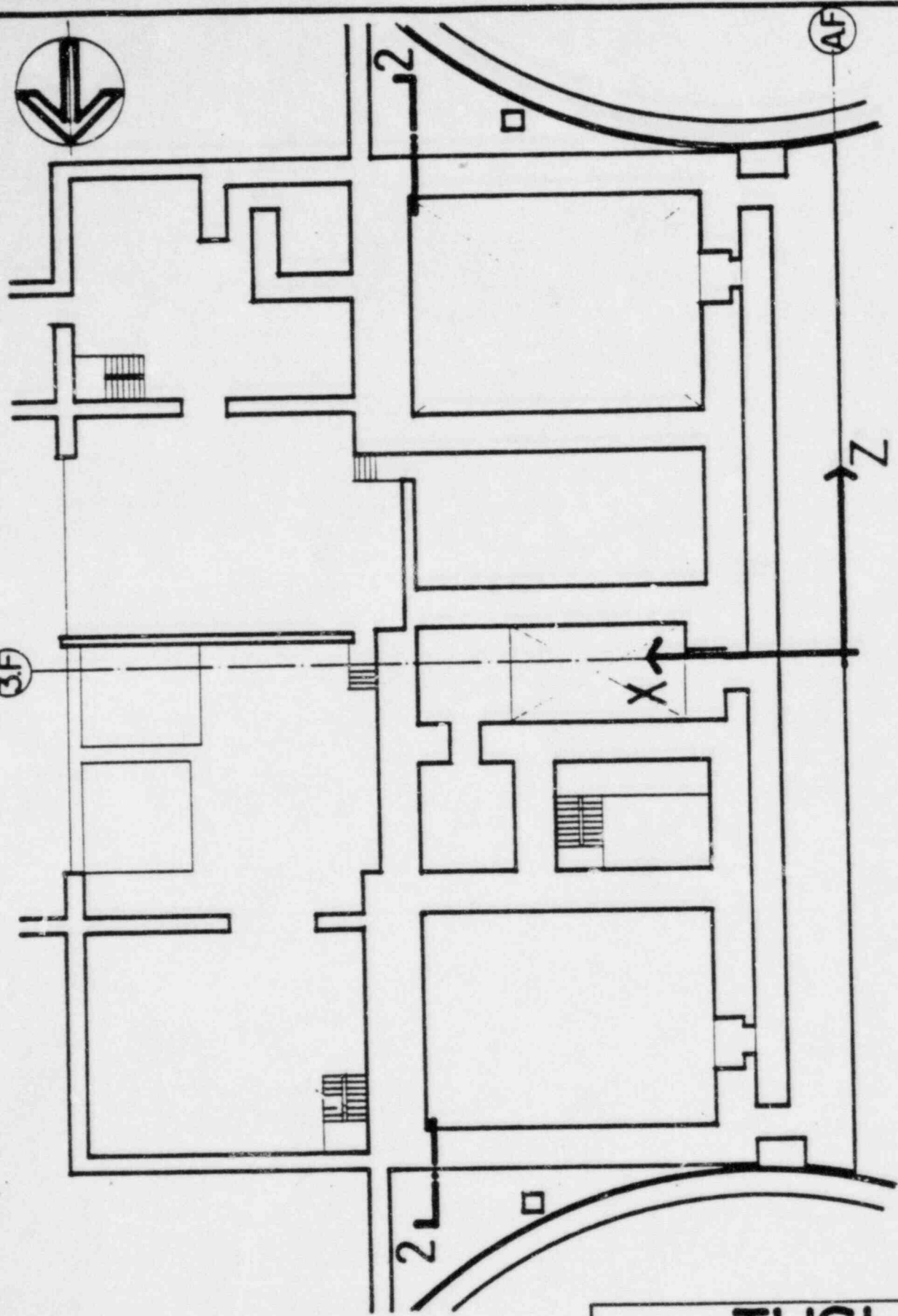
Each figure refers to a specific floor of the building, and contains three curves labeled Ax, Ay and Az, which represent the spectral accelerations in the x, y and z orthogonal directions respectively due to the combined effect of three simultaneous earthquakes at the specified % damping. Please note that Ax and Az are in the east-west and the north-south directions respectively while Ay is in the vertical direction based upon the plant's general coordinate system.

All spectra presented in this report include the coupling effects of non-symmetric structure. The curves shown are for the most critical location of the floor, considering the combined effect of translation and rotation.

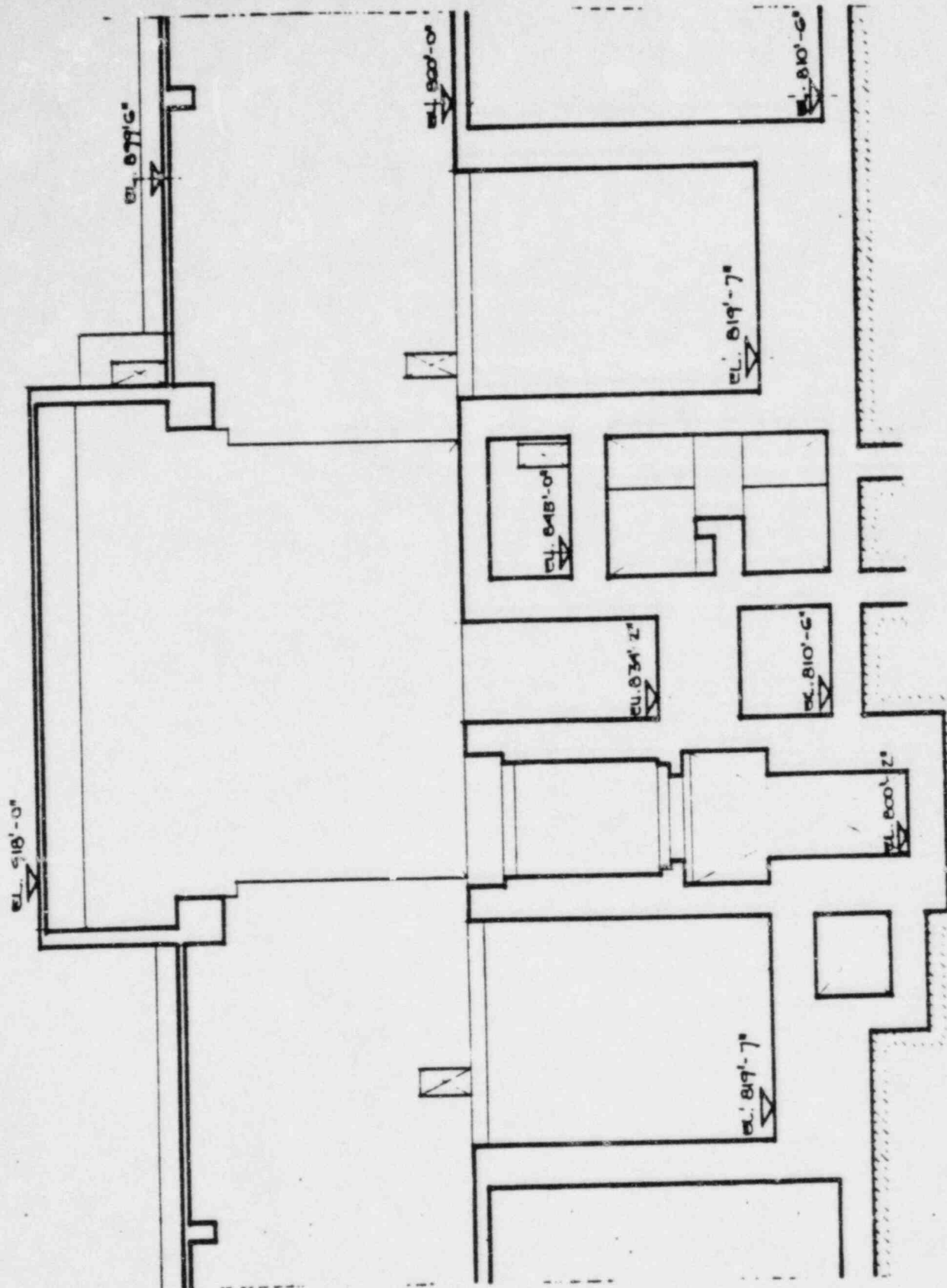
#### References:

1. "Instructure Response Spectra for Fuel Building," Gibbs & Hill report no. FFB-2R, October 1976.
2. "TUSI - Refined Response Spectra for Fuel Building," calculation book no. FFB-1C, Rev. 0
3. "TUSI - Computer Output for Fuel Building," computer output file no. FMI-1P Set 5, Rev. 0.

NOTE : ORIGIN OF COORDINATES IS AT ELEVATION 0'-00"



SECTION 2-2




TUSI

FUEL BUILDING

Gibbs & Hill Inc.

DESIGNER, ENGINEER, ARCHITECT

REV 1000

JOB NO. 2323-A

SCALE - 1/20" = 1'

SKETCH 2







## SUMMARY OF REFINED FLOOR RESPONSE SPECTRA

FIGURE NO.	FLOOR ELEVATION	DAMPING %	EARTHQUAKE	TYPE OF MOTION
433-B	918.00 FT.	1	1/2 SSE	TRANSL. & ROT.
434-B	899.50 FT.	1	1/2 SSE	TRANSL. & ROT.
435-B	860.00 FT.	1	1/2 SSE	TRANSL. & ROT.
436-B	841.00 FT.	1	1/2 SSE	TRANSL. & ROT.
437-B	825.00 FT.	1	1/2 SSE	TRANSL. & ROT.
438-B	810.50 FT.	1	1/2 SSE	TRANSL. & ROT.
439-B	918.00 FT.	2	1/2 SSE	TRANSL. & ROT.
440-B	899.50 FT.	2	1/2 SSE	TRANSL. & ROT.
441-B	860.00 FT.	2	1/2 SSE	TRANSL. & ROT.
442-B	841.00 FT.	2	1/2 SSE	TRANSL. & ROT.
443-B	825.00 FT.	2	1/2 SSE	TRANSL. & ROT.
444-B	810.50 FT.	2	1/2 SSE	TRANSL. & ROT.

TUSI

FUEL BUILDING

**Robb & McNeil, Inc.**  
 ENGINEERS, ARCHITECTS, INTERIORS  
 200 N. 25th St.  
 NEW YORK, N.Y. 10010

TABLE 2

## SUMMARY OF REFINED FLOOR RESPONSE SPECTRA

FIGURE NO.	FLOOR ELEVATION	DAMPING %	EARTHQUAKE	TYPE OF MOTION
409-B	918.00 FT.	2	SSE	TRANSL. & ROT.
410-B	899.50 FT.	2	SSE	TRANSL. & ROT.
411-B	860.00 FT.	2	SSE	TRANSL. & ROT.
412-B	841.00 FT.	2	SSE	TRANSL. & ROT.
413-B	825.00 FT.	2	SSE	TRANSL. & ROT.
414-B	810.50 FT.	2	SSE	TRANSL. & ROT.
415-B	918.00 FT.	3	SSE	TRANSL. & ROT.
416-B	899.50 FT.	3	SSE	TRANSL. & ROT.
417-B	860.00 FT.	3	SSE	TRANSL. & ROT.
418-B	841.00 FT.	3	SSE	TRANSL. & ROT.
419-B	825.00 FT.	3	SSE	TRANSL. & ROT.
420-B	810.50 FT.	3	SSE	TRANSL. & ROT.

TUSI

FUEL BUILDING

Gibbs &amp; Hill, Inc.

STRUCTURAL ENGINEERS

NEW YORK

NO. 2525

TABLE 3

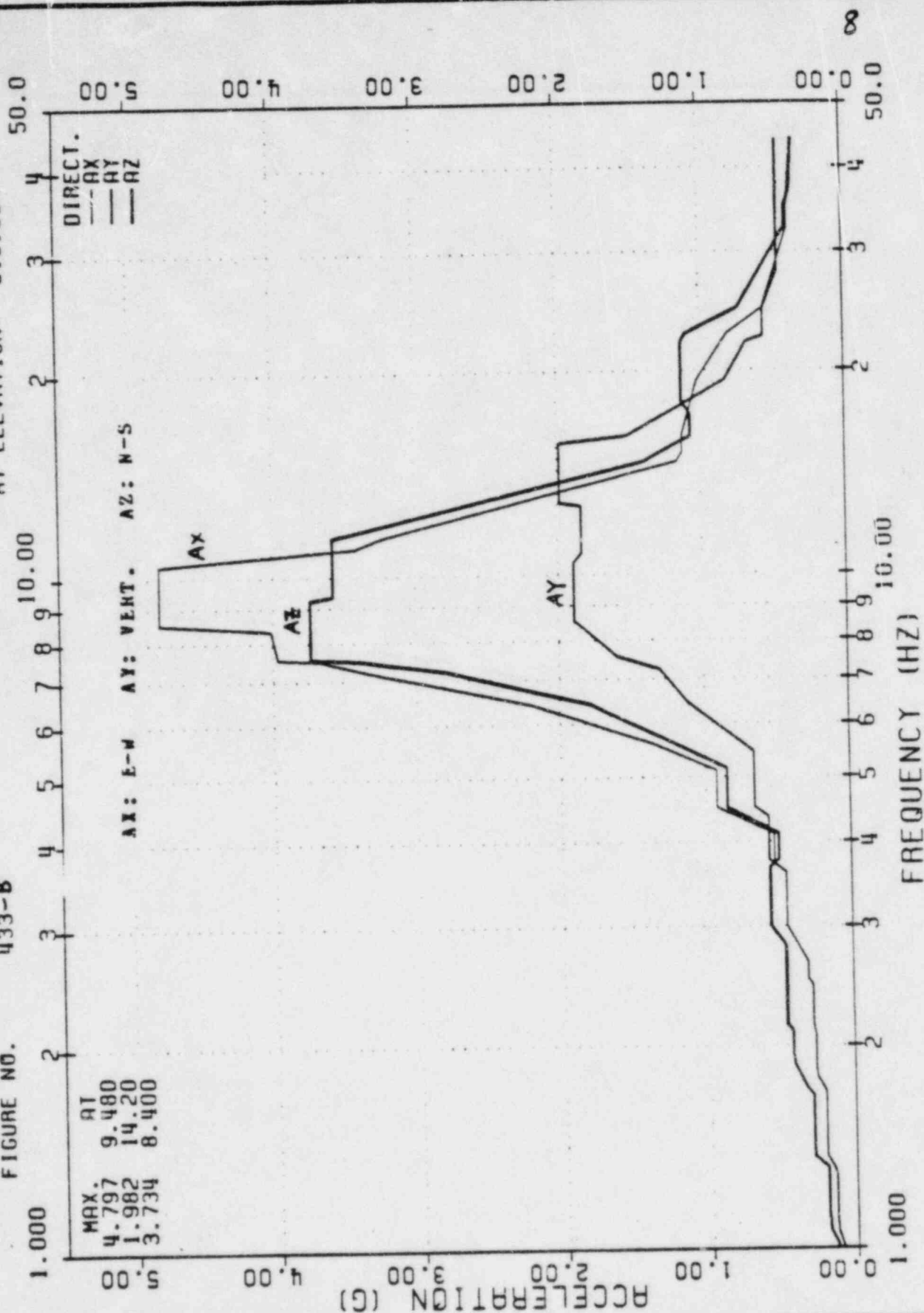
# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR 1/2SSE;

FIGURE NO. 433-B

DAMPING = 0.01

AT ELEVATION 918.00



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

FIGURE-433-B

ISSUE NO. DATE PLT. CHG. 900.

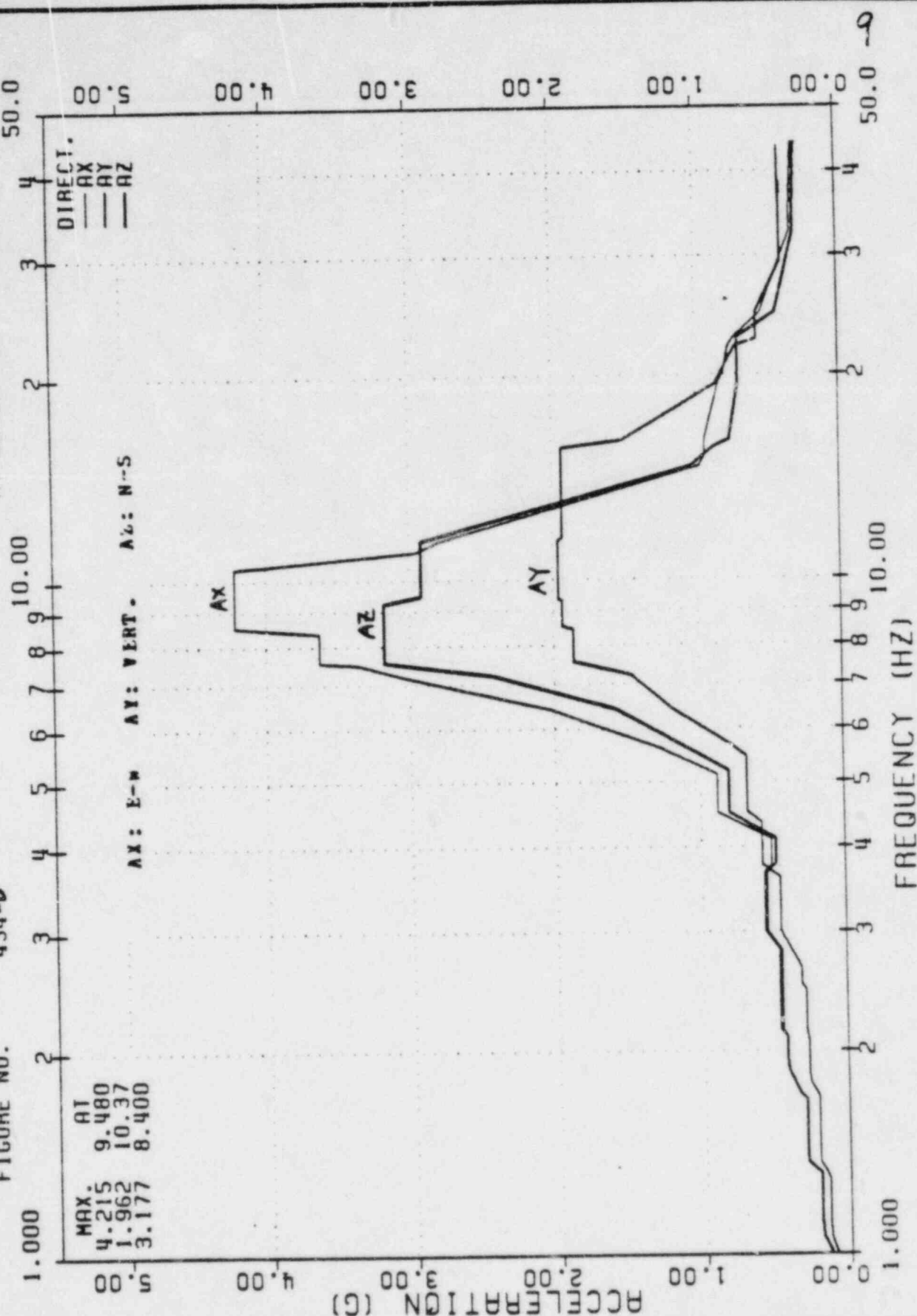
APPROVALS

ISSUED FOR



# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR 1/25SE;  
 DAMPING = 0.01  
 AT ELEVATION 899.50  
 FIGURE NO. 434-B



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS  
 SINCE 1900

JOB NO. 2323

FIGURE-434-B

# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

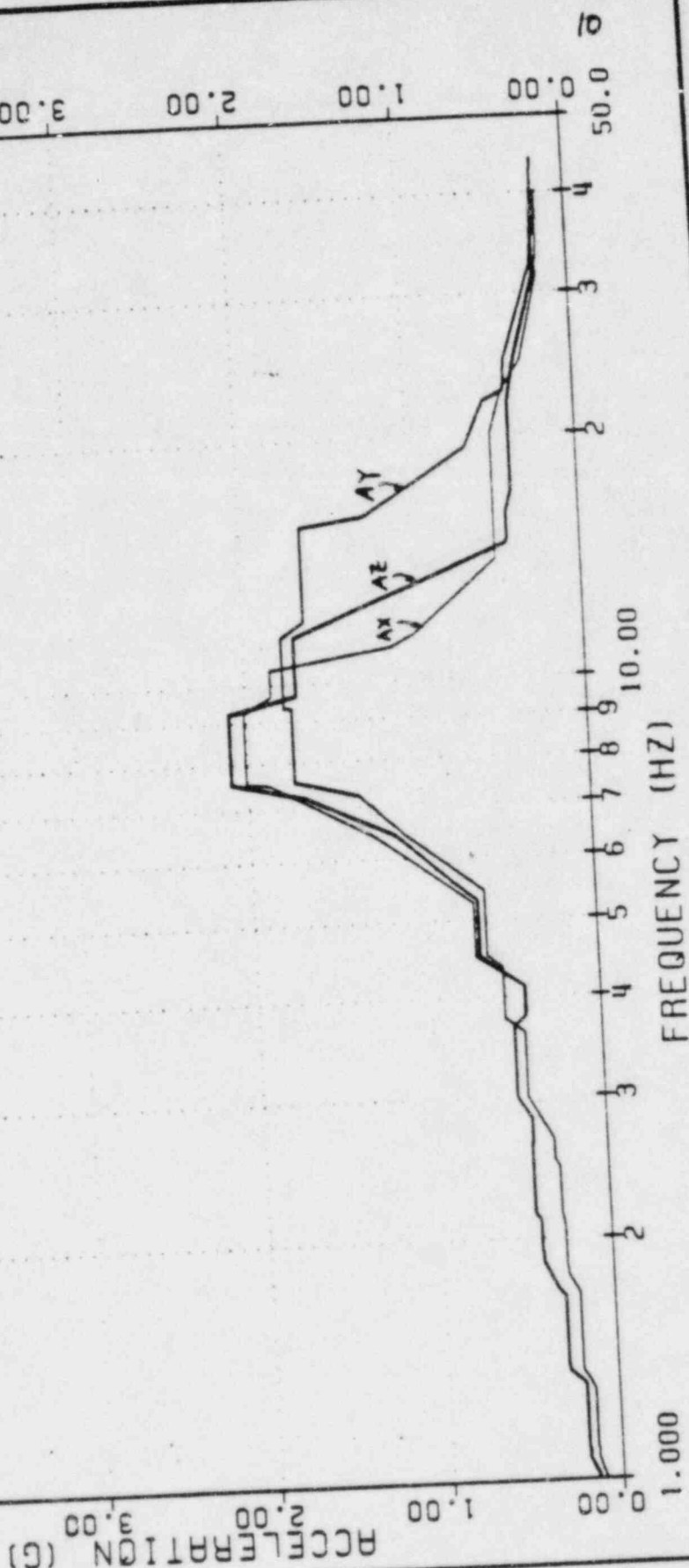
FLOOR RESPONSE SPECTRA FOR 1/2SSE;  
 DAMPING = 0.01  
 AT ELEVATION 860.00

FIGURE NO. 435-B

AX: E-W AY: VERT. AZ: N-S

MAX. AT  
 2.011 8.400  
 1.774 10.37  
 2.094 8.400

DIRECT.  
 — AX  
 — AY  
 — AZ



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

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 ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

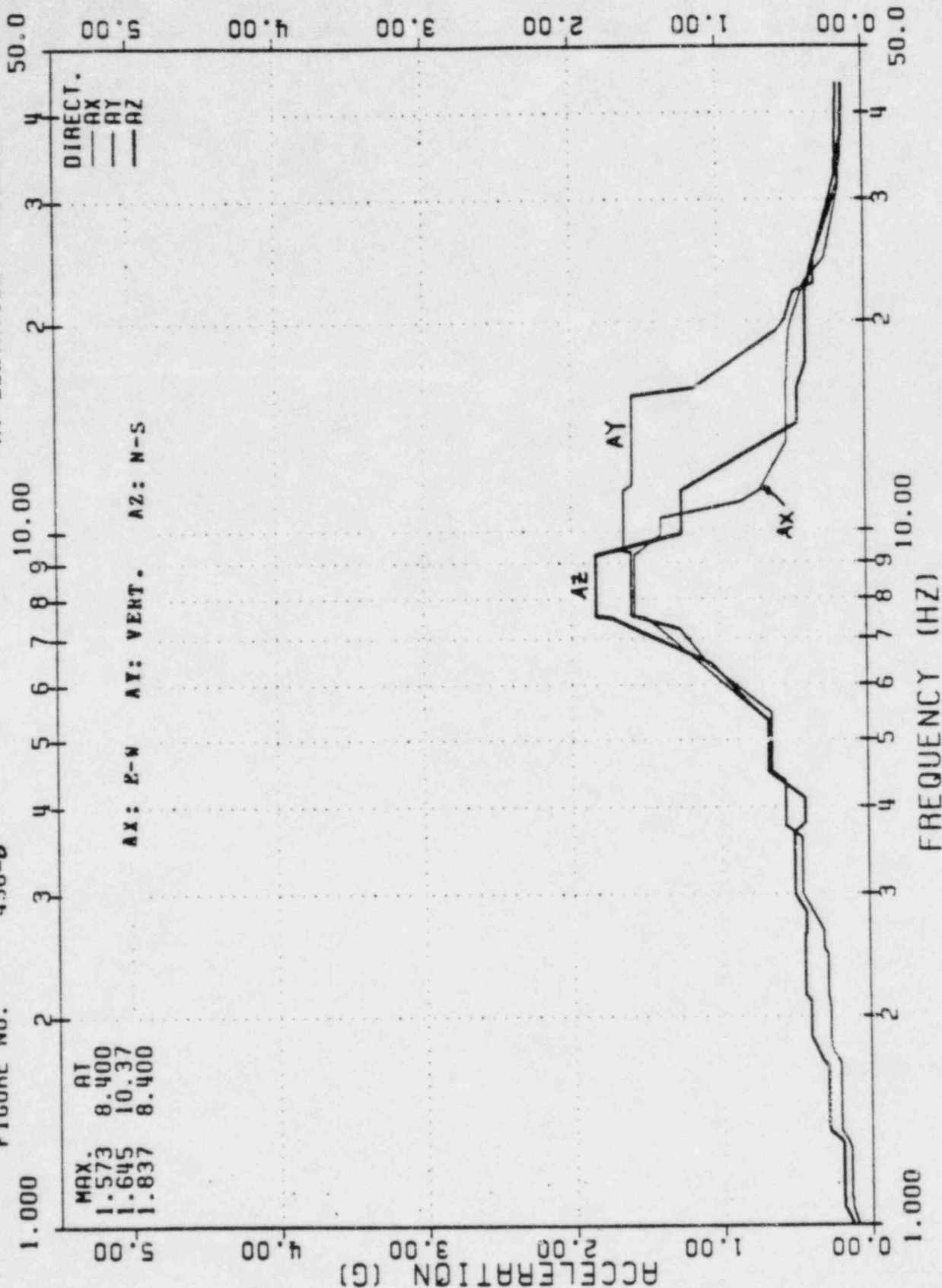
FIGURE-435-B

DATE PLT. CHG. 1/78

APPROVED

ISSUED FOR

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
 FLOOR RESPONSE SPECTRA FOR 1/2SSE;  
 DAMPING = 0.01  
 AT ELEVATION 841.00  
 FIGURE NO. 436-B



TUSI-FUEL BUILDING  
 REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.  
 ENGINEERS, DESIGNERS, CONSTRUCTORS  
 NEW YORK

FIGURE-436-B

JOB NO. 2323

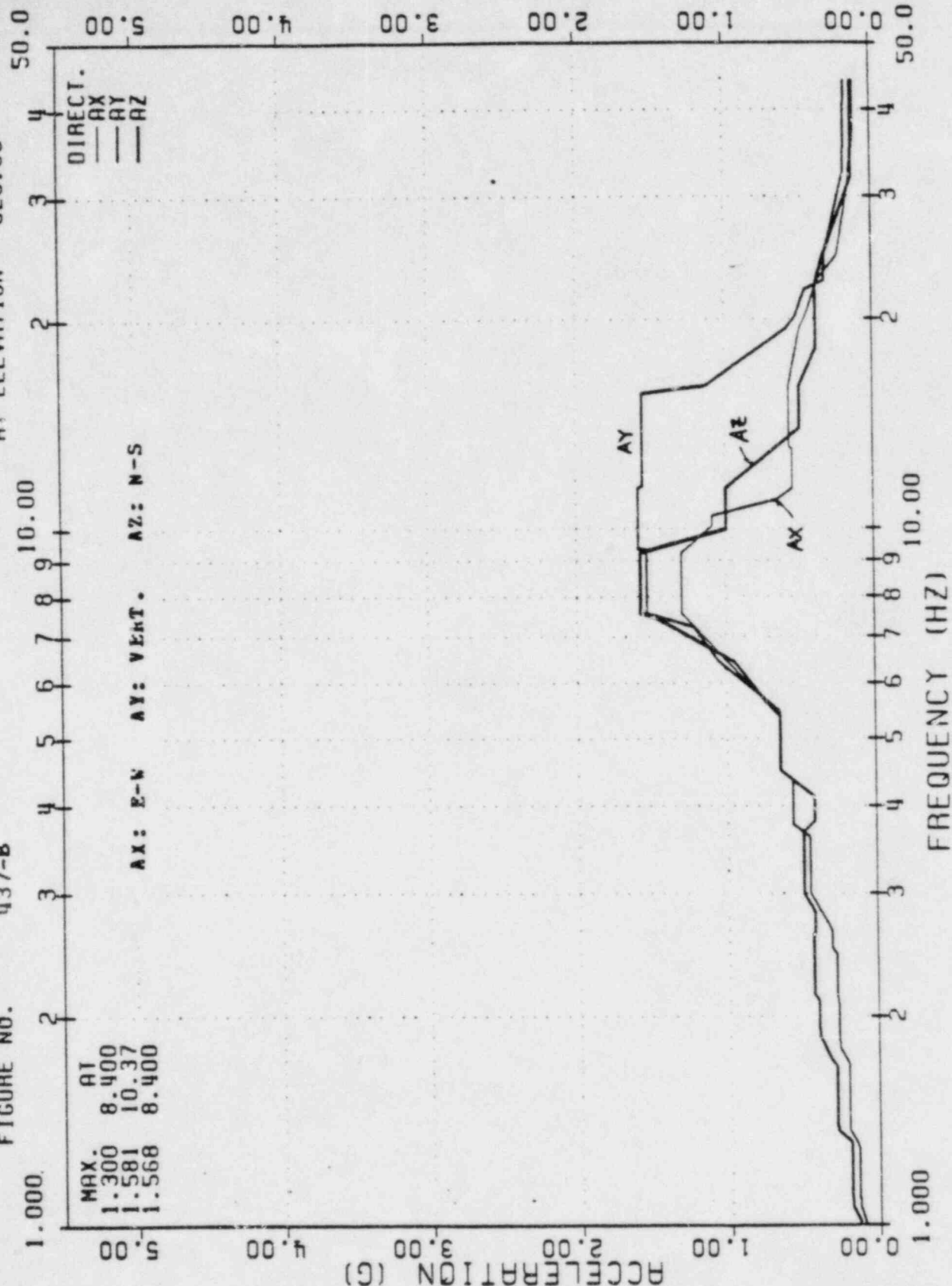
ISSUED FOR

DATE PLT. CHG. 5/1/58

APPROVALS

# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR 1/25SE;  
 DAMPING = 0.01  
 AT ELEVATION 825.00  
 FIGURE NO. 437-B



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

FIGURE-437-B

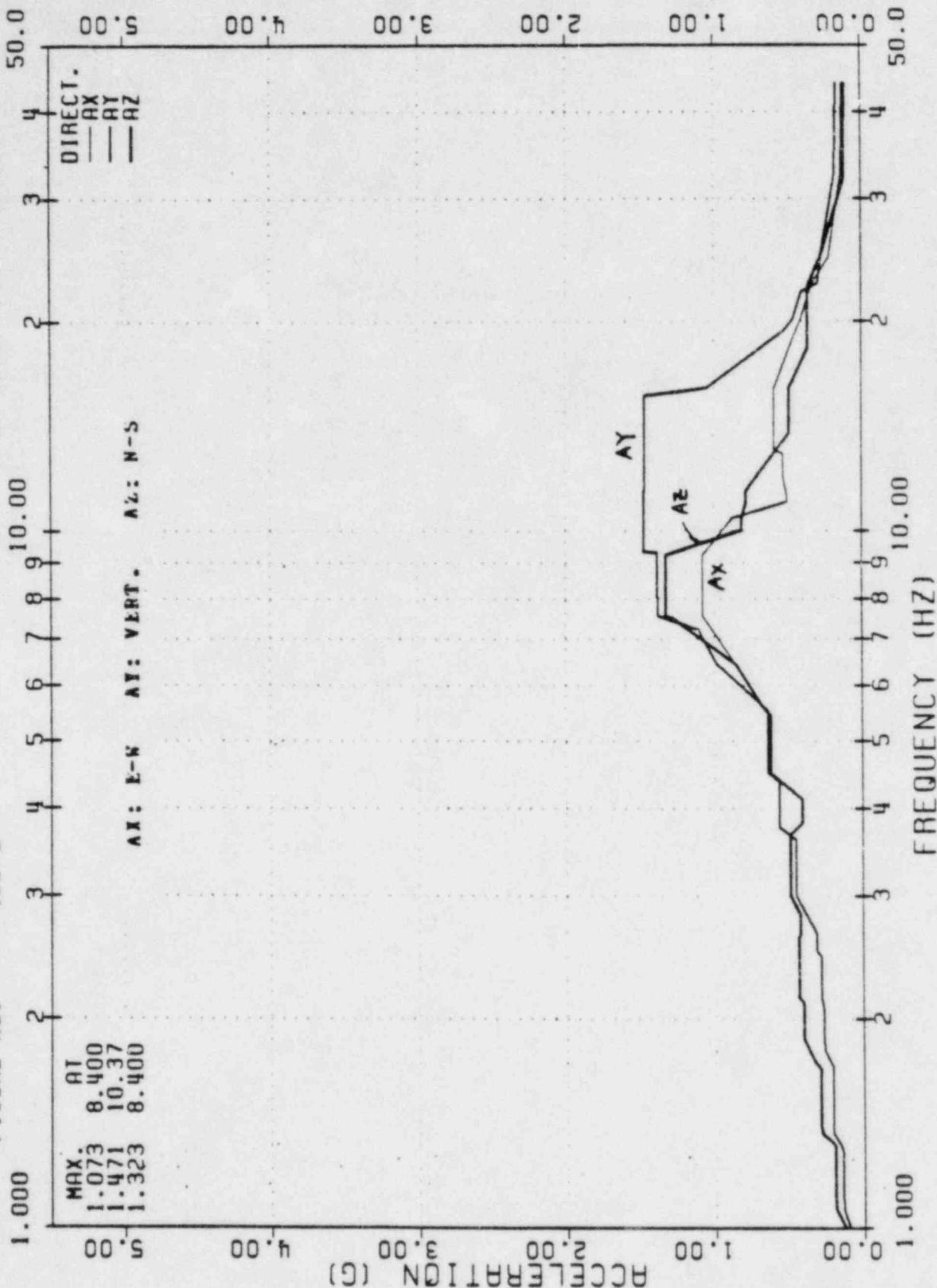
# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR 1/2SSE;

FIGURE NO. 438-B

DAMPING = 0.01

AT ELEVATION 810.50



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

FIGURE-438-B



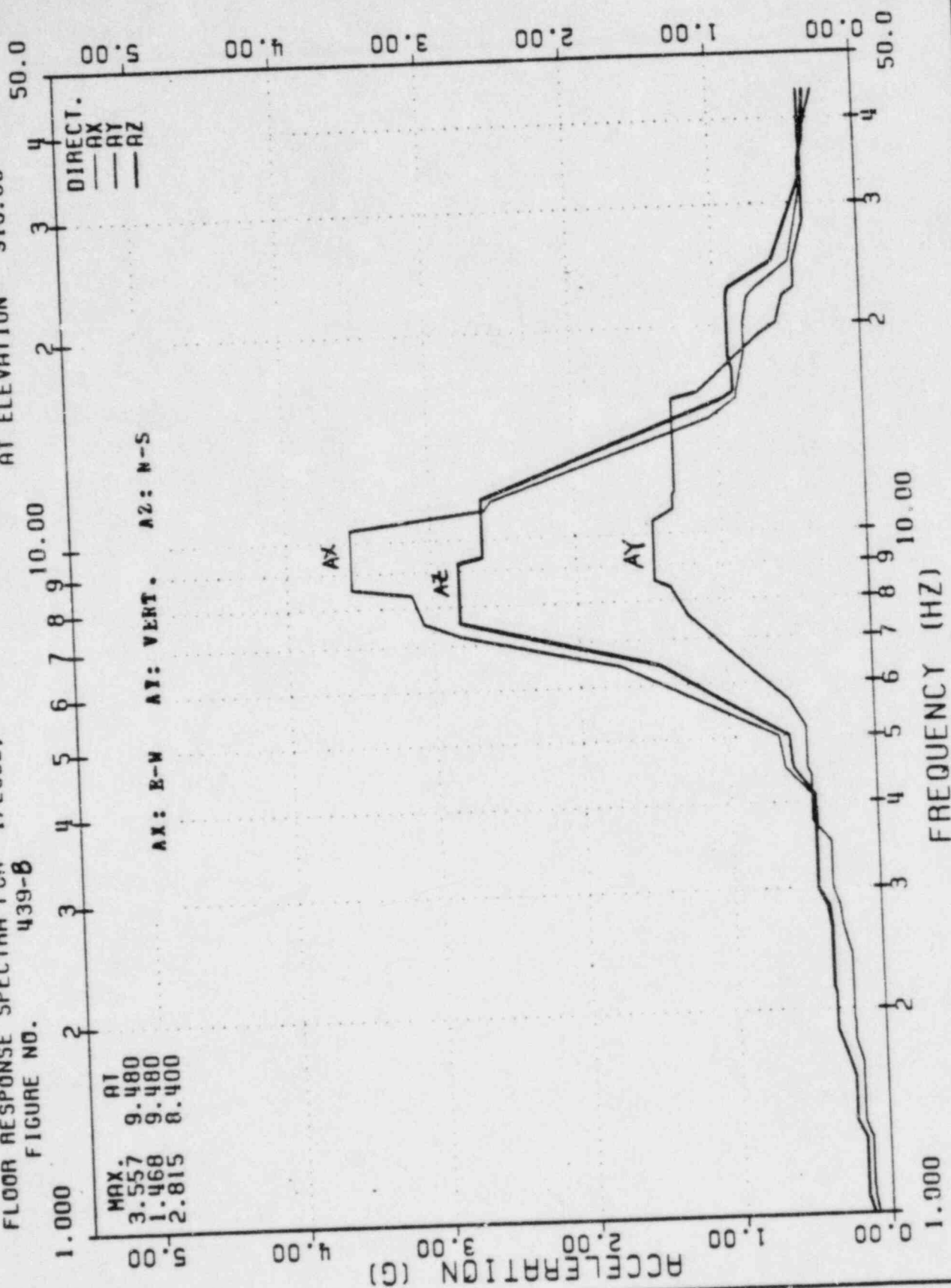
THIEST-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

DAMPING = 0.02

### AT ELEVATION

1/25SE: SPECTRA FOR

FIGURE NO. 439-8



MAX.	AT
3.557	9.480
1.468	9.480
2.815	8.400

AX: B-W AY: VERT. A2: N-S

TUSI-FUEL BUILDING

## REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

JES 146. 2323

FIGURE-439-B

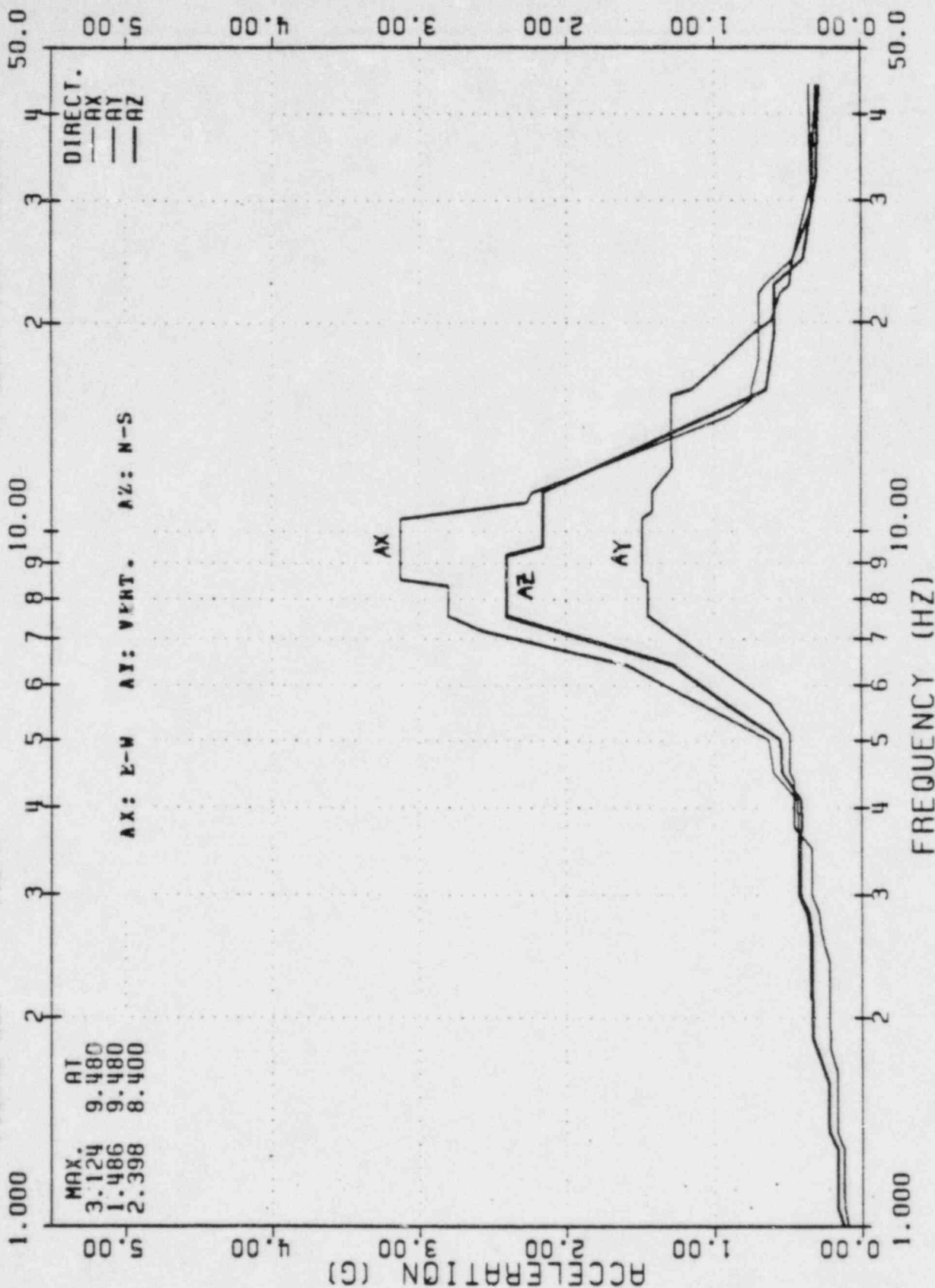
# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR 1/2SSE;

FIGURE NO. 440-B

DAMPING = 0.02

AT ELEVATION 899.50



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

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JOB NO. 2323

FIGURE-440-B

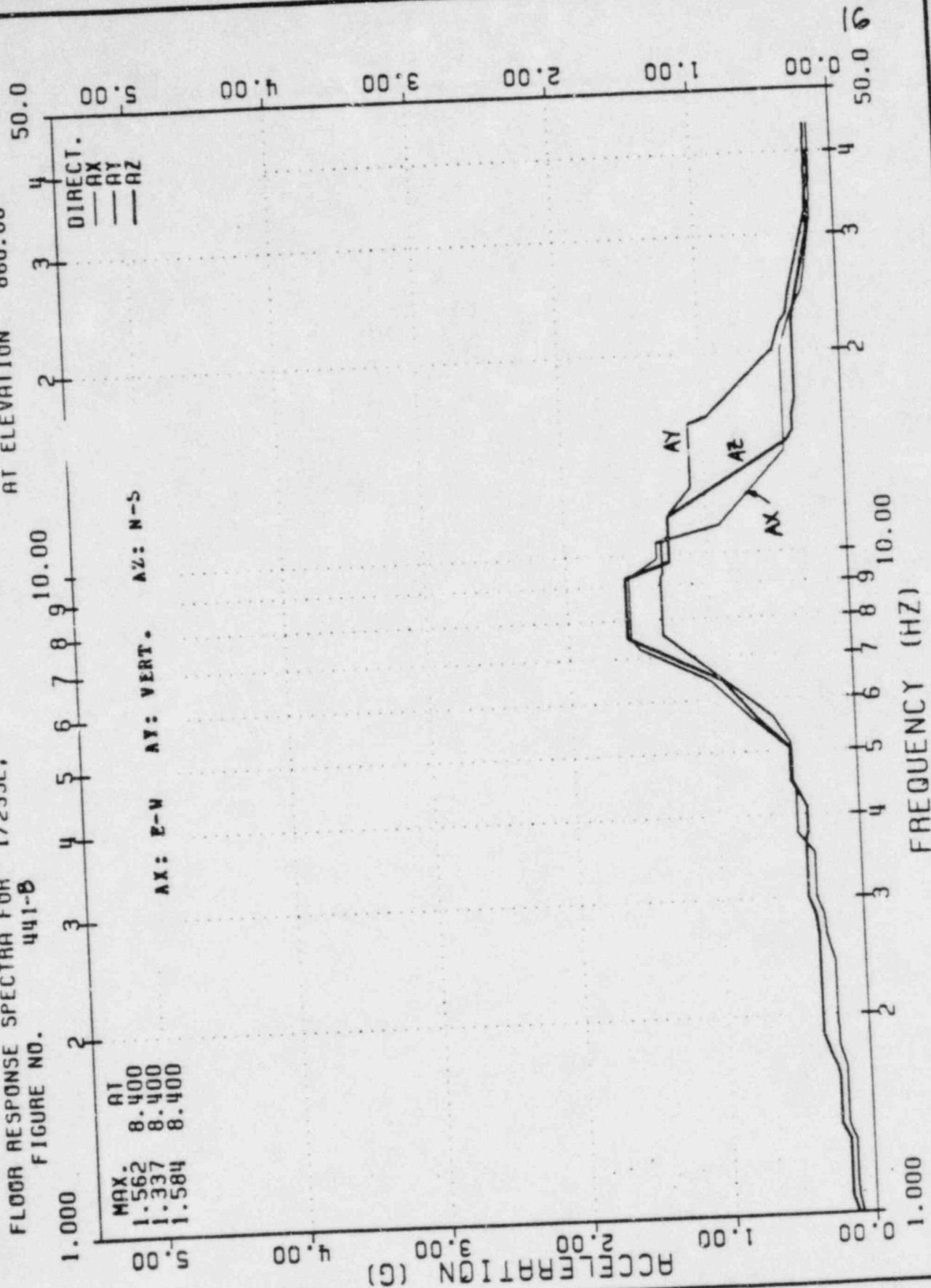
ISSUE NO. DATE PLT'D. CHK'D. 100-  
 1500 ADP WT

APPROVED BY: [Signature] DATE: [Blank] P.A.

ISSUED FOR

# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR 1/2SSE;  
 DAMPING = 0.02  
 AT ELEVATION 860.00  
 FIGURE NO. 441-B



TUSI-FUEL BUILDING  
 REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.  
 ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

FIGURE- 441-B

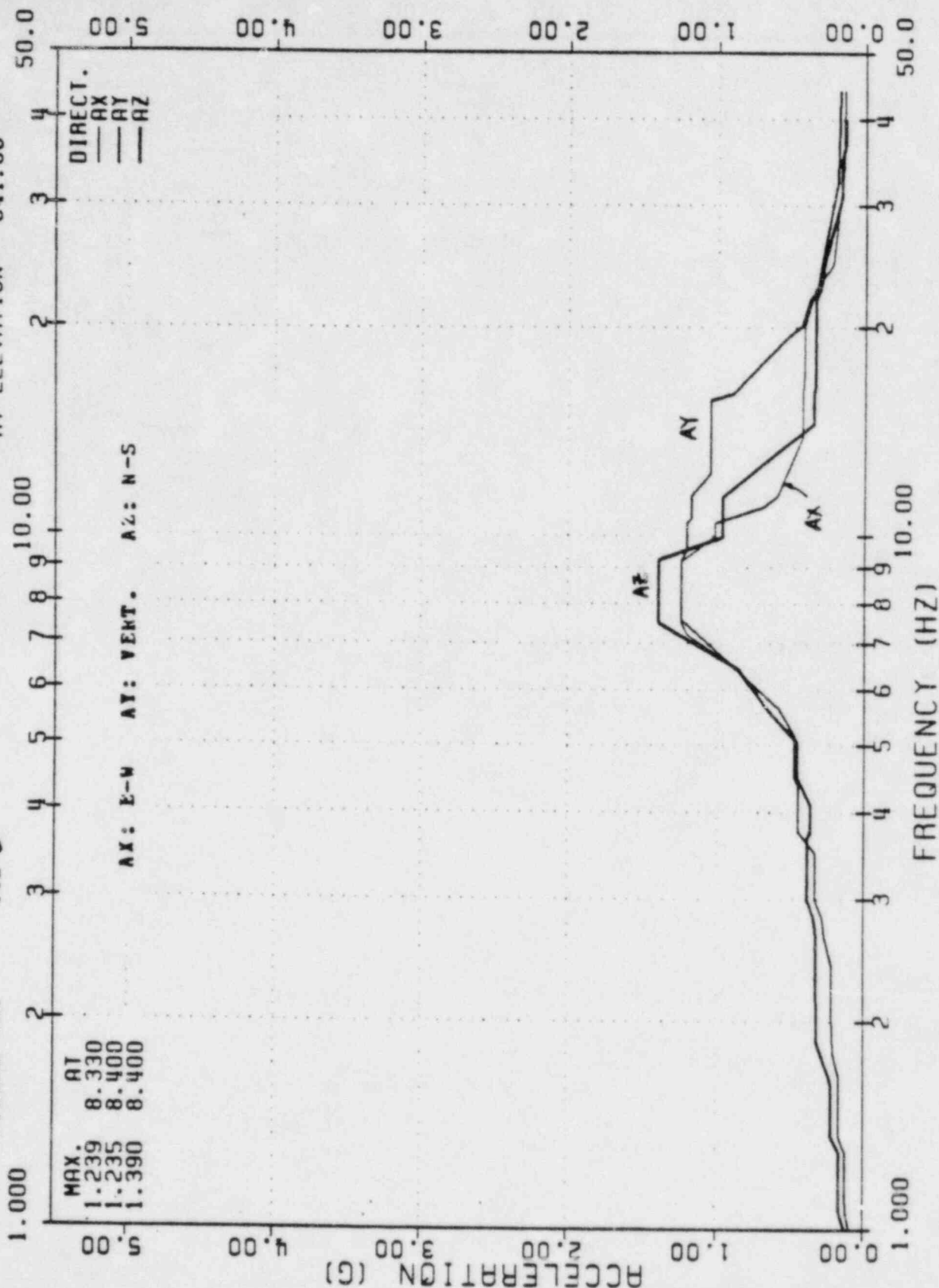
# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR 1/2SSE;

FIGURE NO. 442-B

DAMPING = 0.02

AT ELEVATION 841.00



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

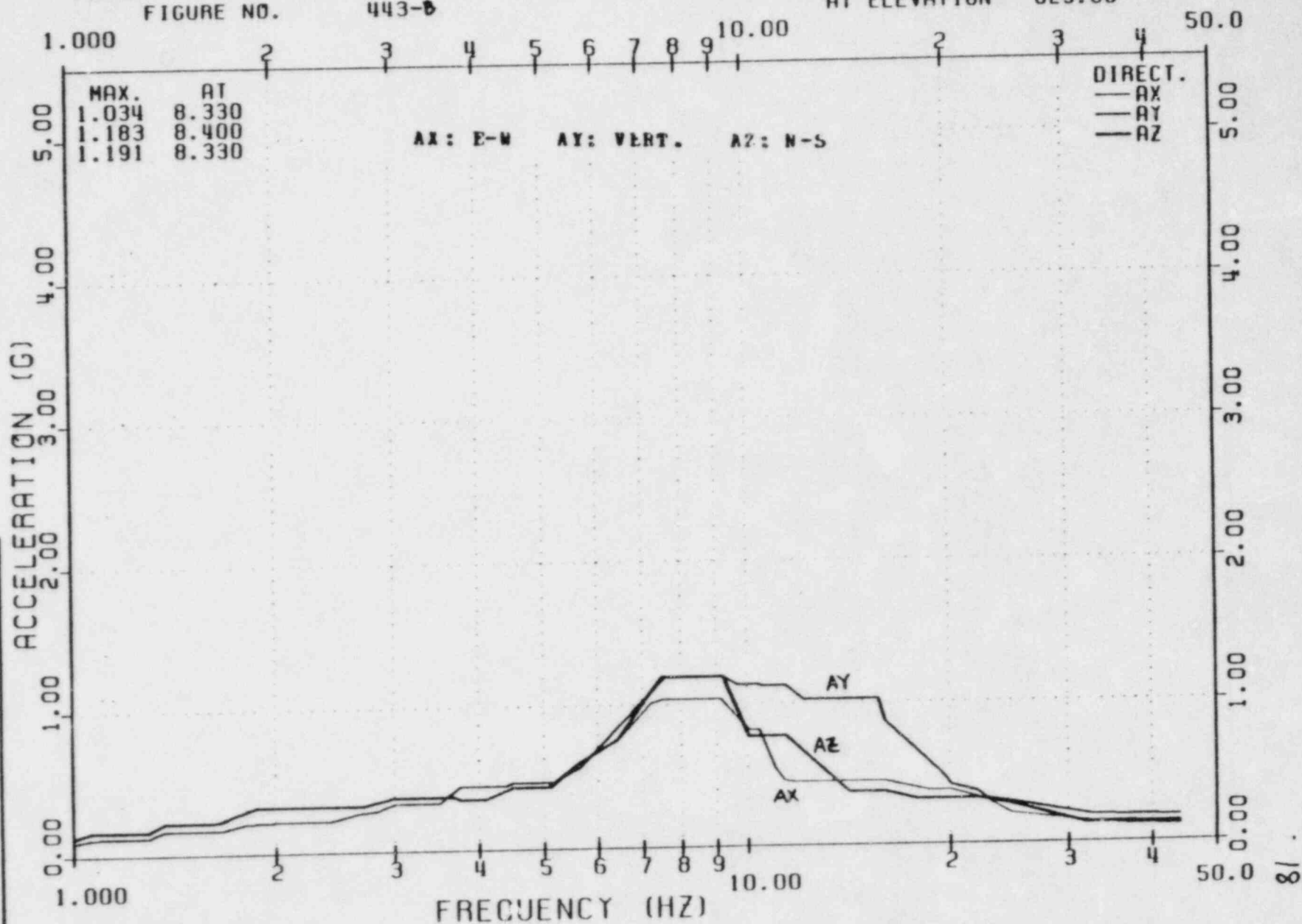
FIGURE-442-B

ISSUED FOR APPROVAL

ISSUED FOR

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
 FLOOR RESPONSE SPECTRA FOR 1/2SSE;  
 FIGURE NO. 443-B

DAMPING = 0.02  
 AT ELEVATION 825.00



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

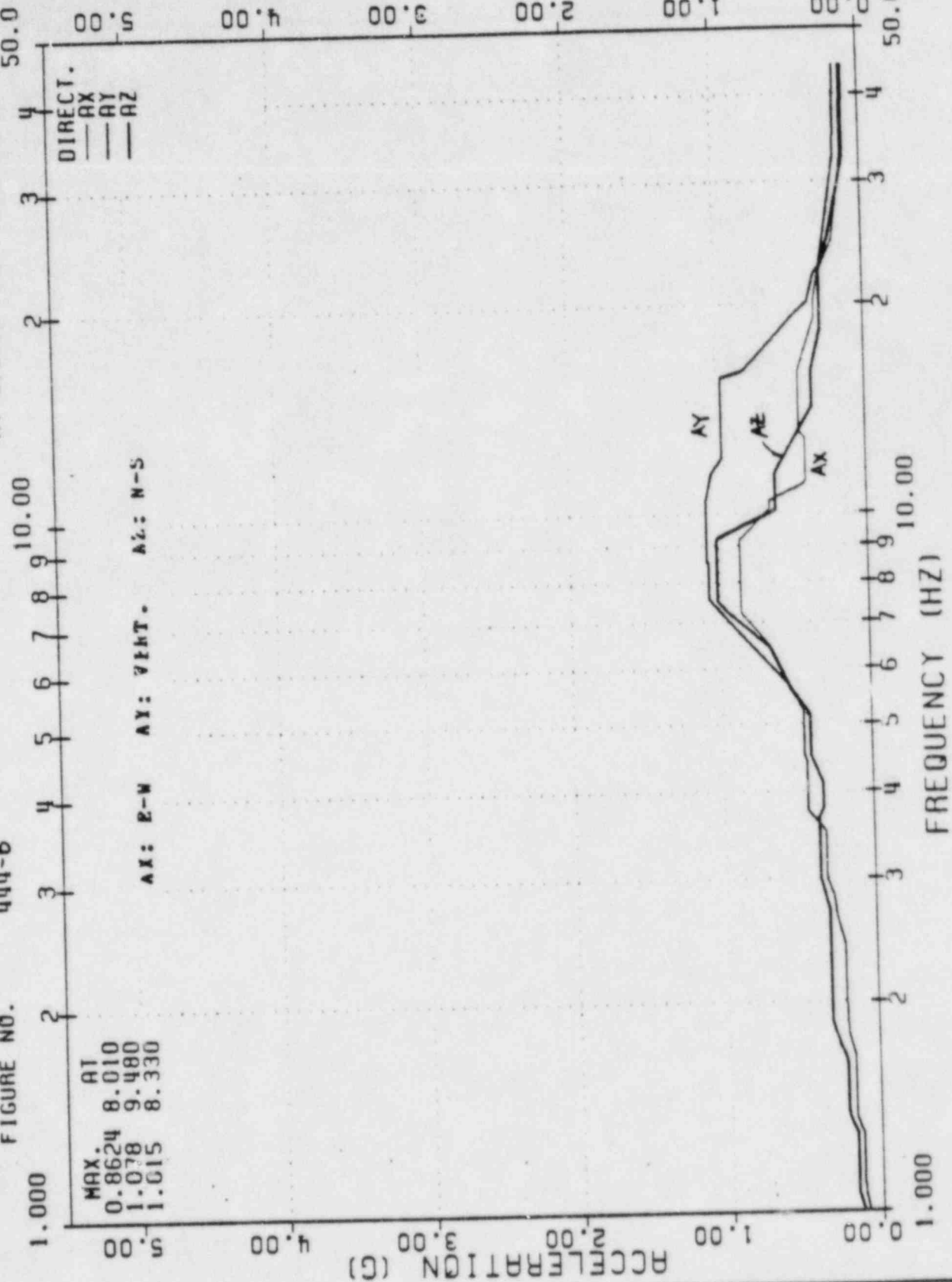
JOB NO. 2323

FIGURE-443-B



# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR 1/2SSE;  
DAMPING = 0.02  
AT ELEVATION 810.50  
FIGURE NO. 444-B



TUSI-FUEL BUILDING  
REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.  
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FIGURE-444-B

0 12/87 ROP-WY  
ISSUE NO. DATE PLTD. CORR. OR

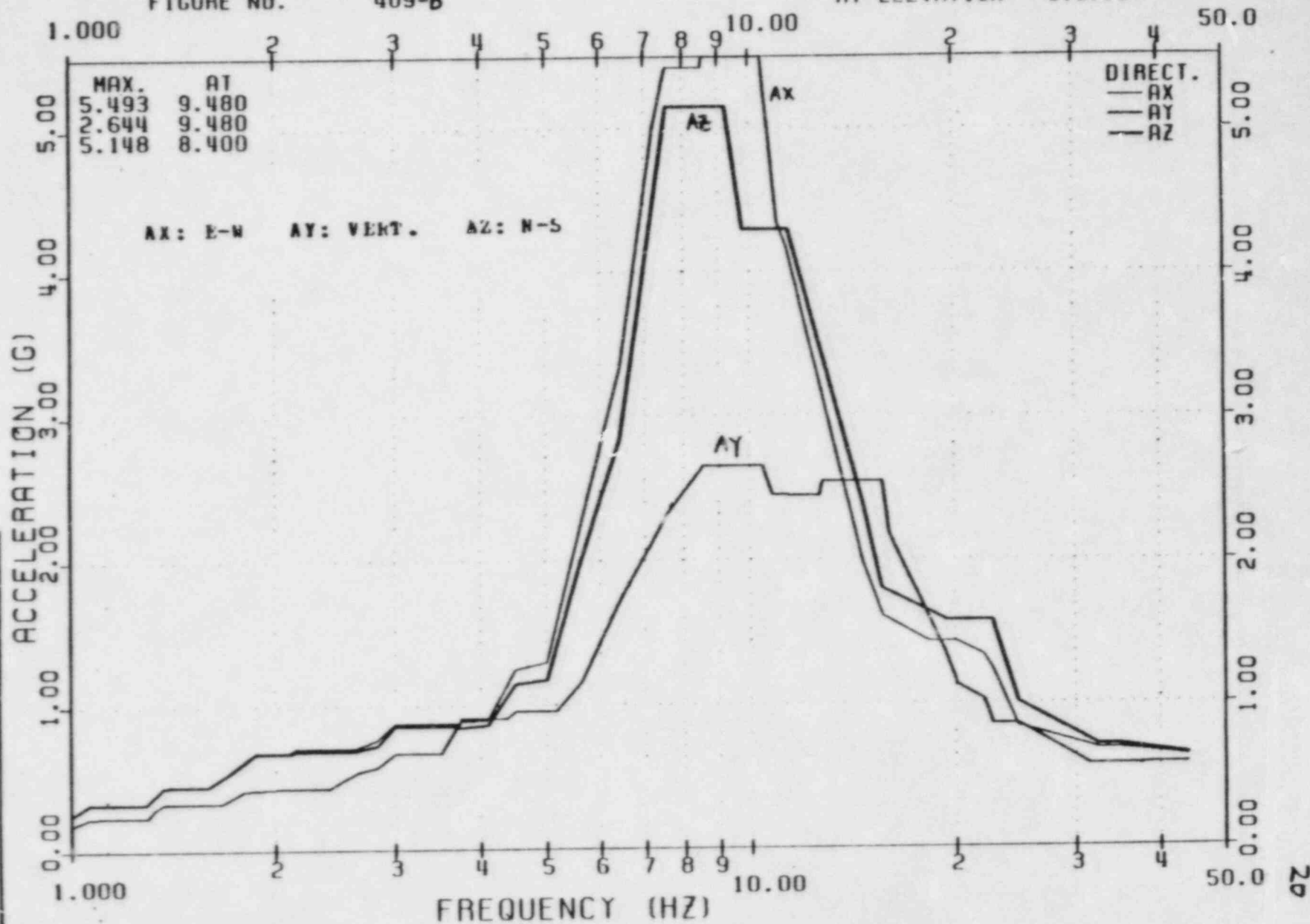
MAN. BY: J. H. HILL, S.E. DES. BY: J. H. HILL, S.E. P.E.  
APPROVED

ISSUED FOR

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE;  
FIGURE NO. 409-B

DAMPING = 0.02

AT ELEVATION 918.00



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

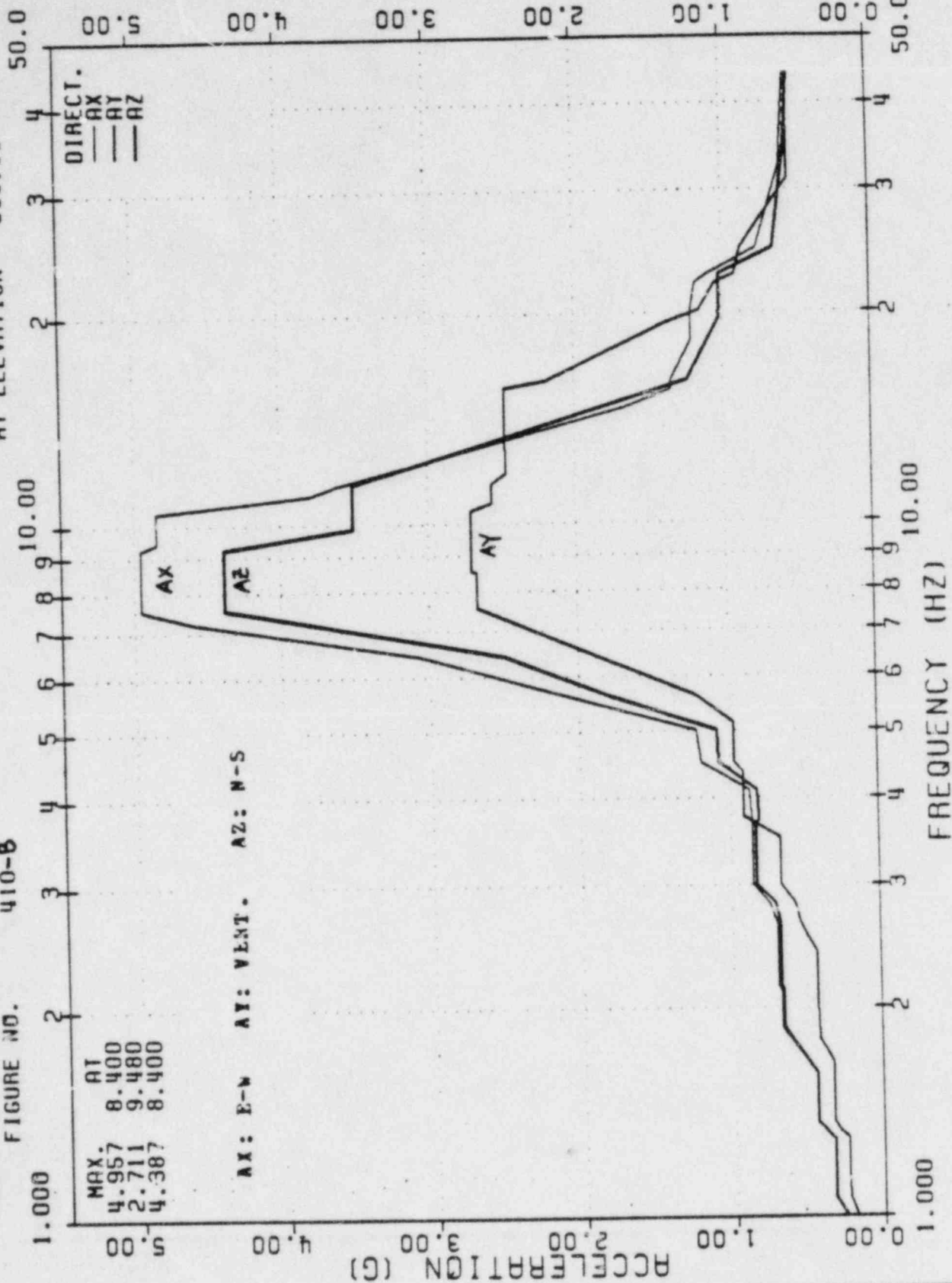
ENGINEERS, DESIGNERS, CONSULTANTS

JAN 25 23

FIGURE-409-B

# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR SSE:  
DAMPING = 0.02  
AT ELEVATION 899.50  
FIGURE NO. 410-B



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

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AND MORE

JOB NO. 2323

FIGURE- 410-B

12/27/60

DATE PLT. CHG. 100

ISSUED FOR

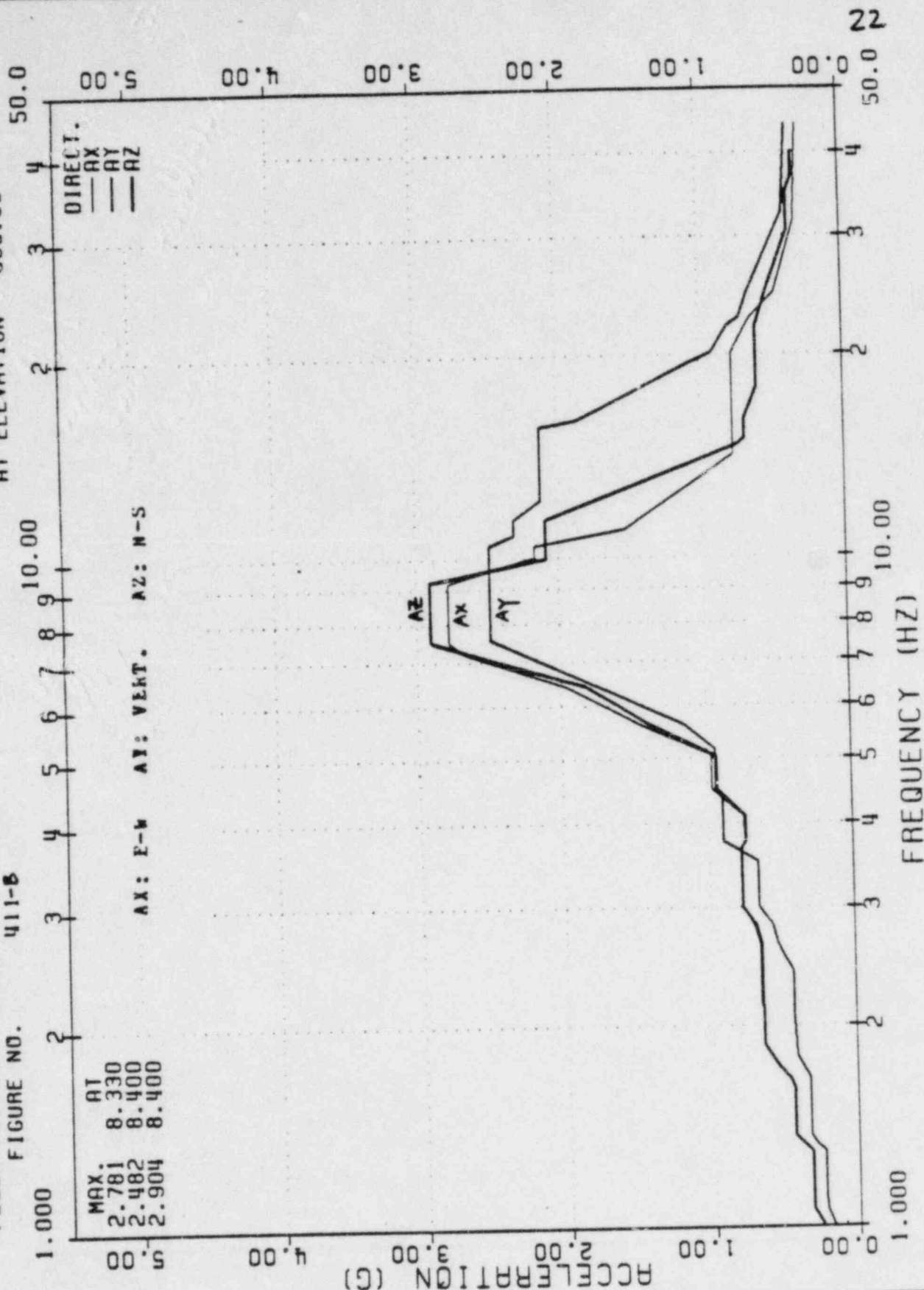
APPROVAL

# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR SSE;

DAMPING = 0.02  
AT ELEVATION 860.00

FIGURE NO. 411-B



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

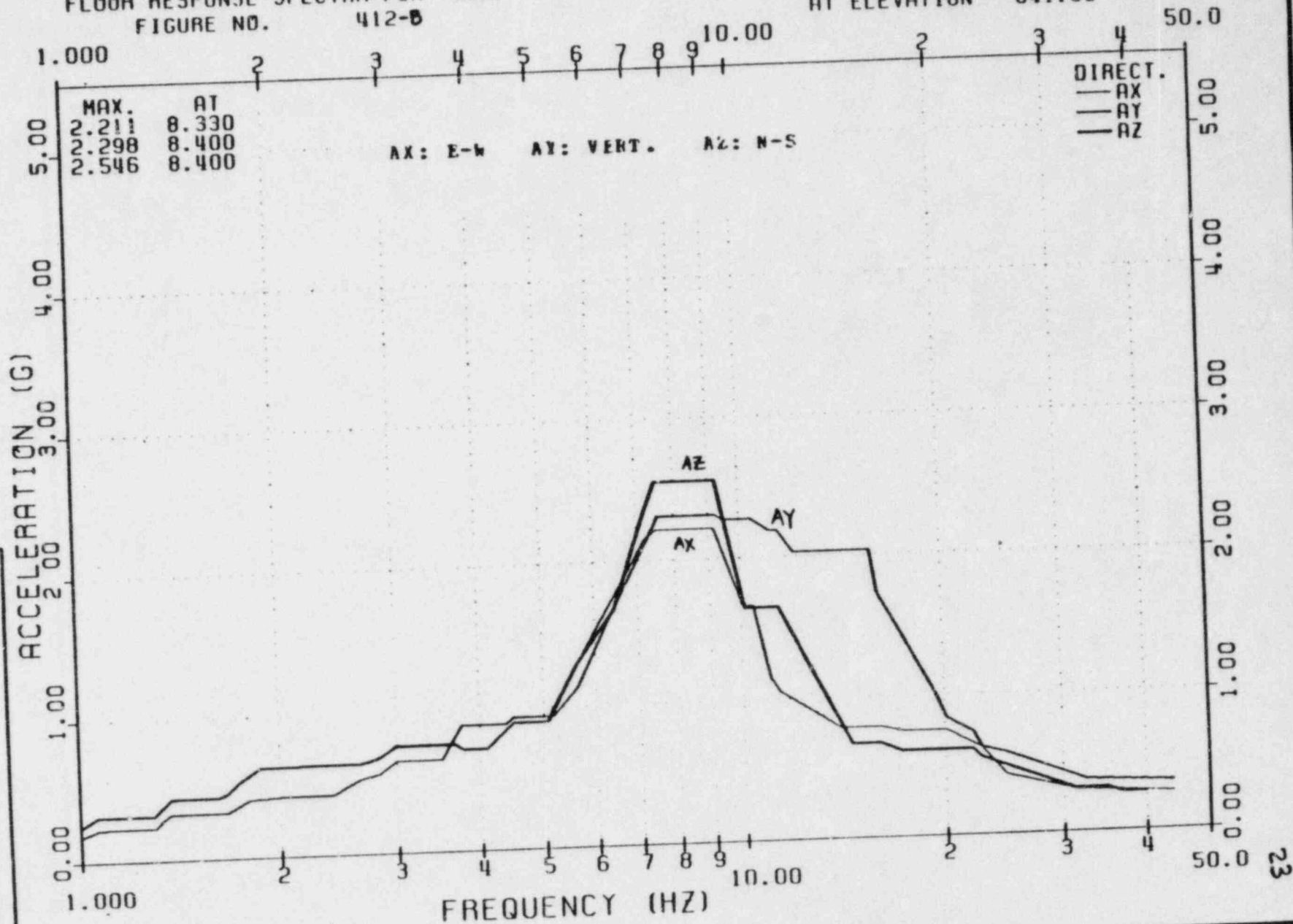
NO. 1000

JOB NO. 2323

FIGURE-411-B

# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING; FLOOR RESPONSE SPECTRA FOR SSE; FIGURE NO. 412-B

DAMPING = 0.02  
 AT ELEVATION 841.00



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

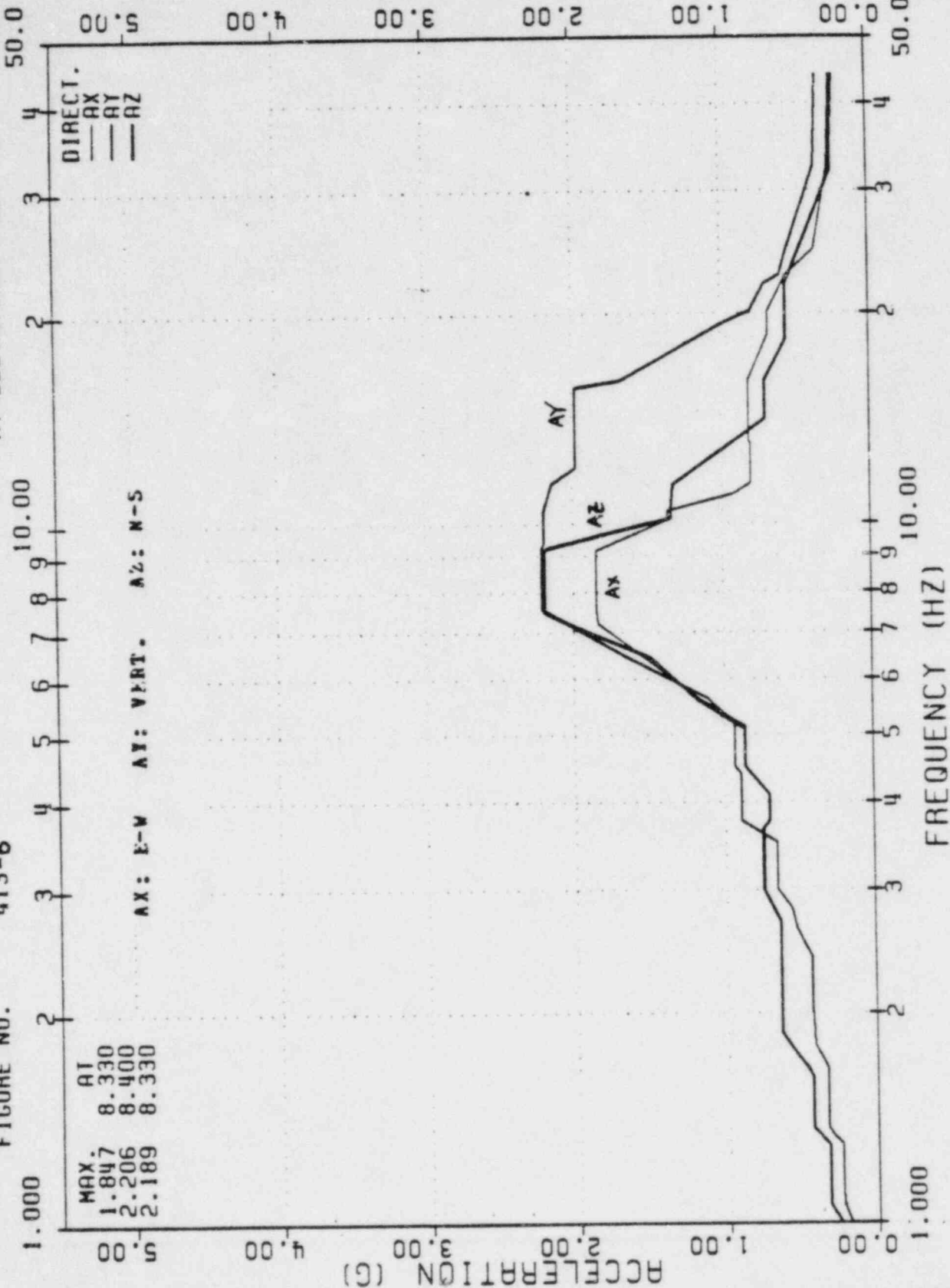
JOB NO. 2323

FIGURE-412-B



# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR SSE;  
 DAMPING = 0.02  
 AT ELEVATION 825.00  
 FIGURE NO. 413-8



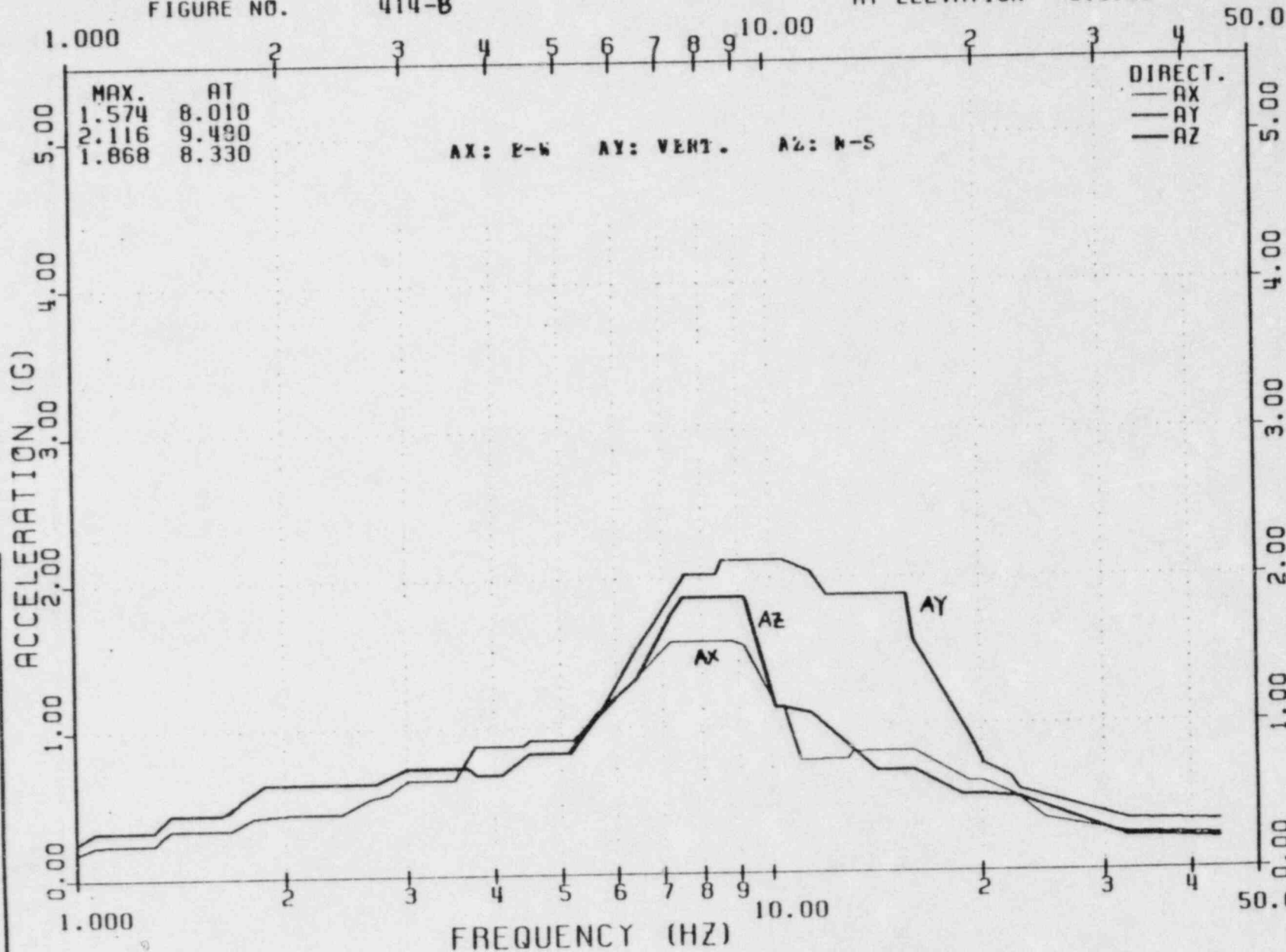
TUSI-FUEL BUILDING	
REFINED RESPONSE SPECTRA	
GIBBS & HILL, INC. ENGINEERS, DESIGNERS, CONSTRUCTORS	FIGURE-413-8
JOB NO. 2923	

ISSUED FOR	DATE	PLT'D	CHK'D	APP'D

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE;  
FIGURE NO. 414-B

DAMPING = 0.02

AT ELEVATION 810.50



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

FIGURE-414-B

0.12 G<sup>2</sup> MP SURT

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13300 DATE 11/10/68 BY

13300 DATE

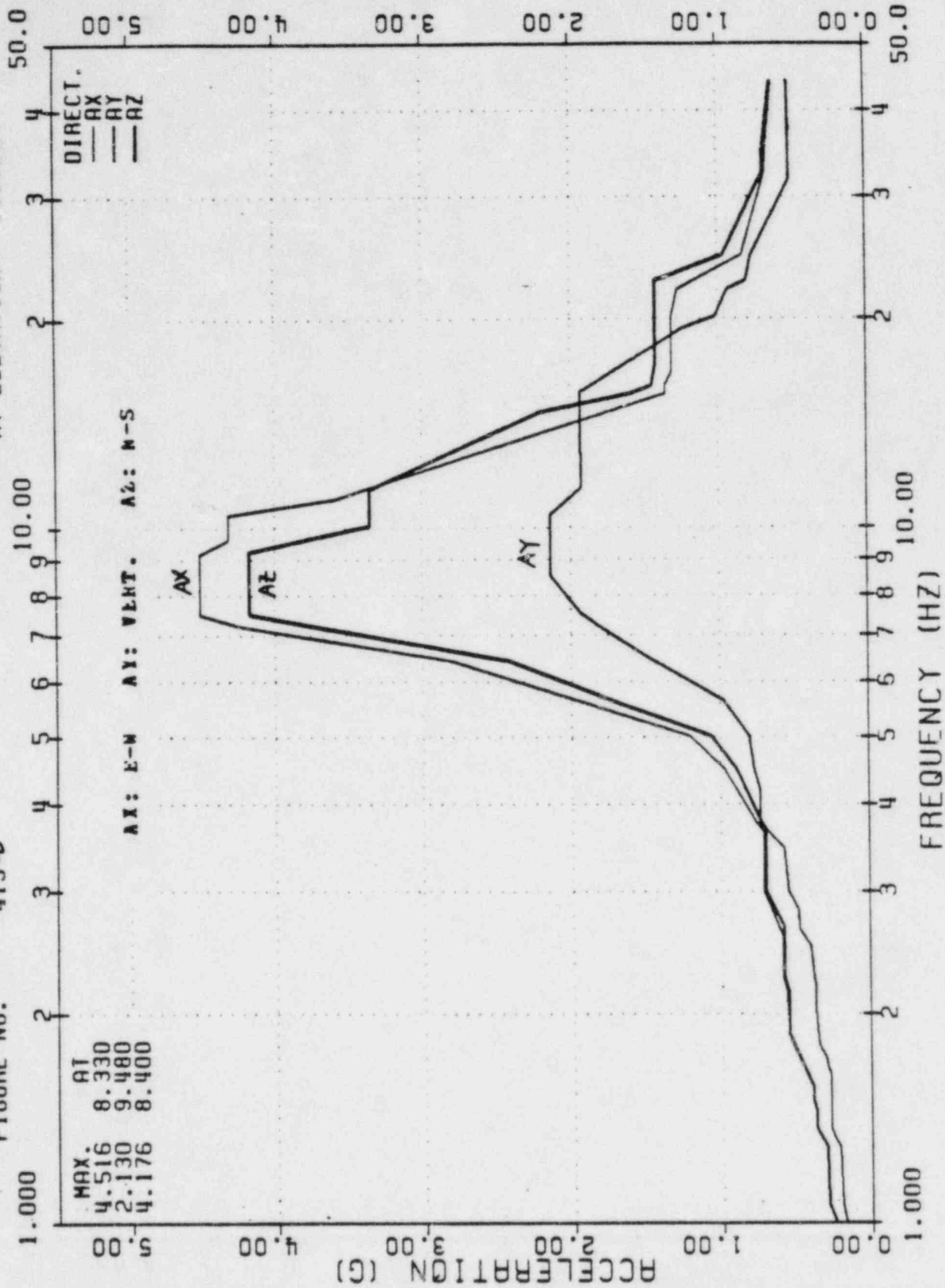
# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR SSE;

FIGURE NO. 415-B

DAMPING = 0.03

AT ELEVATION 918.00



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

ISSUED FOR 2323

FIGURE-415-B

ISSUED FOR 2323

72-48

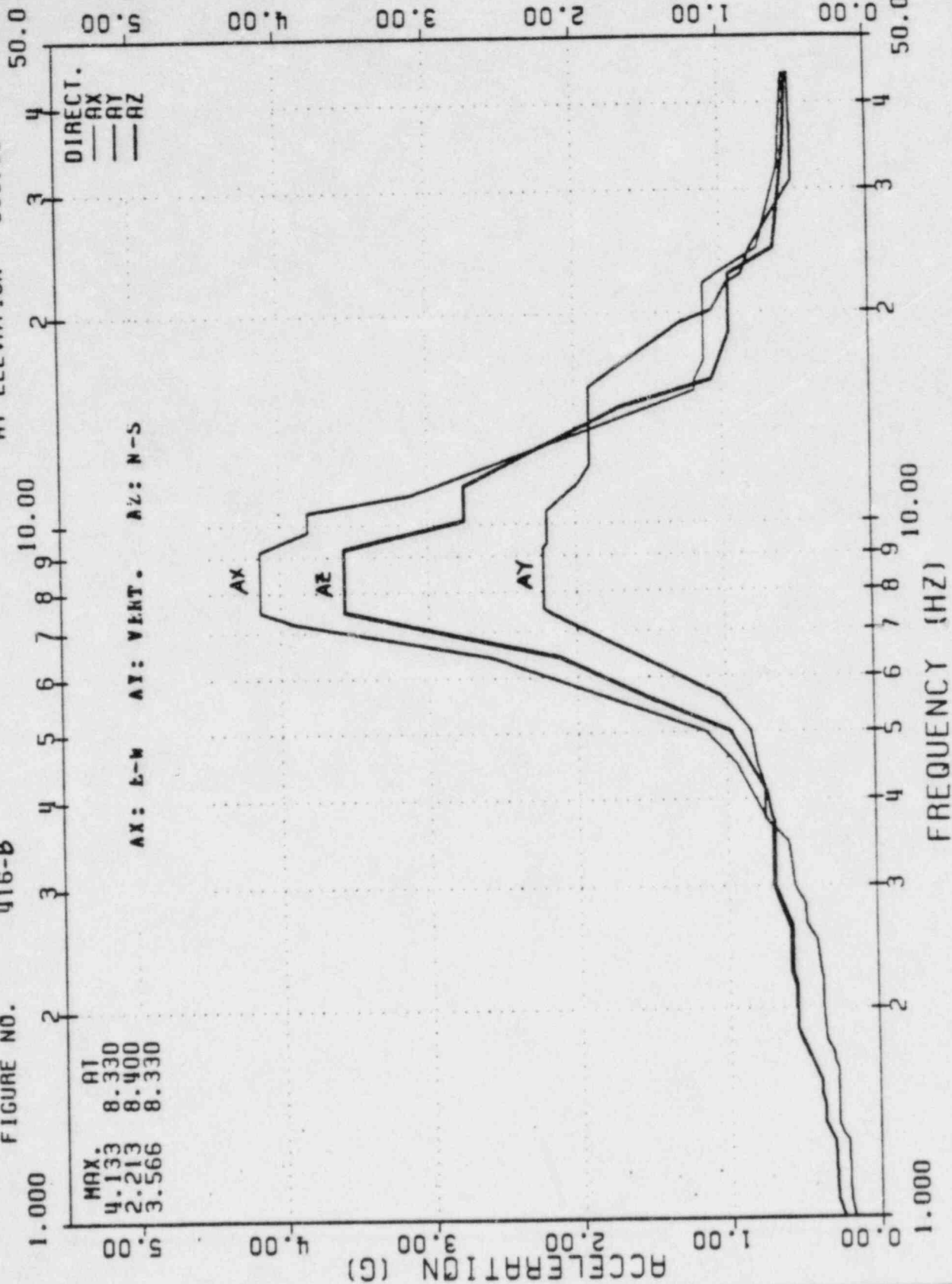
# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR SSE;

FIGURE NO. 416-B

DAMPING = 0.03

AT ELEVATION 899.50



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

FIGURE-416-B

0-118/13 ADP 437

ISSUE DATE PLTD. CHNG. LOG

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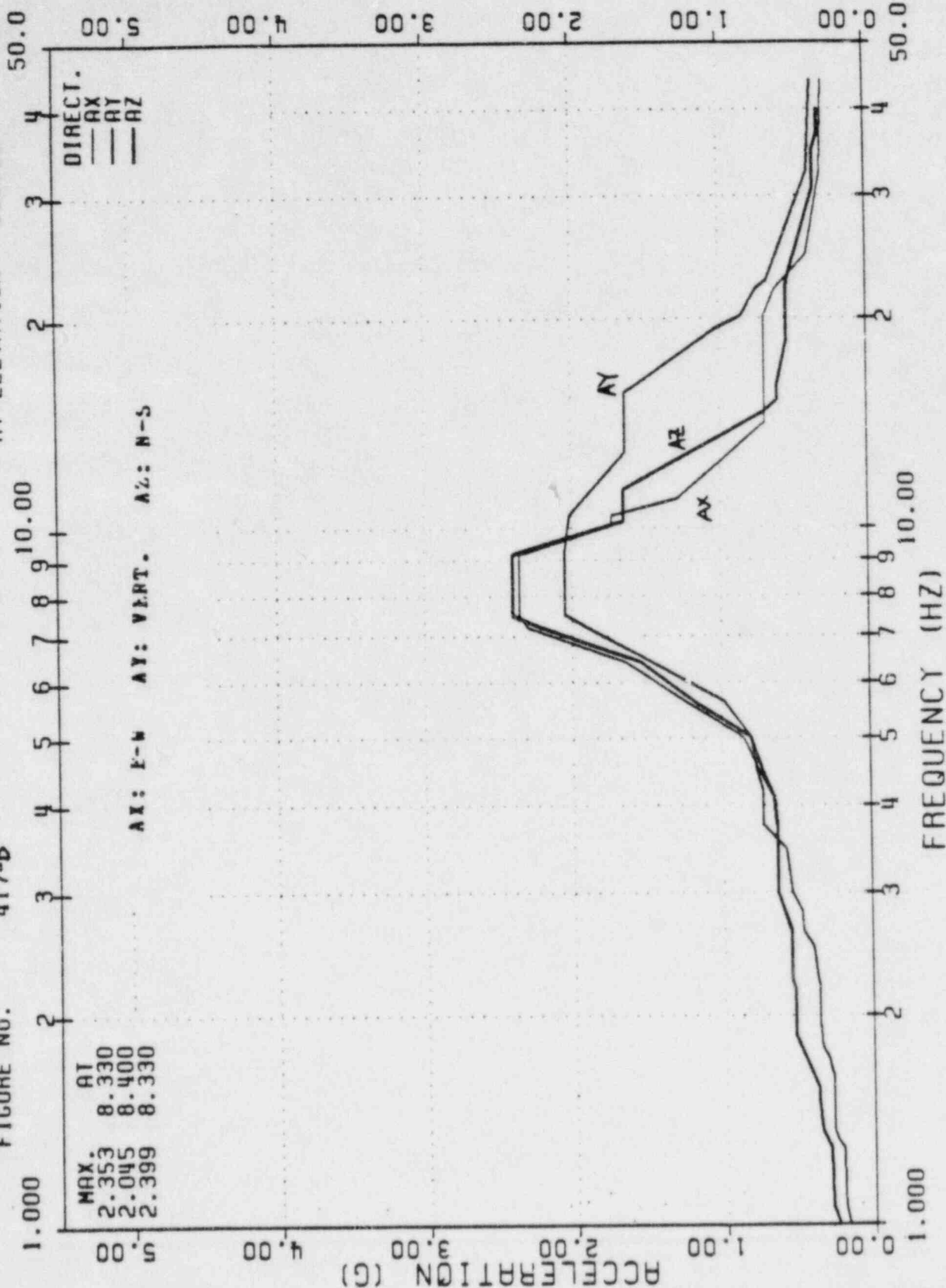
# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR SSE;

FIGURE NO. 417-B

DAMPING = 0.03

AT ELEVATION 860.00



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

FIGURE-417-B

0 12/83 RDP-WT

ISSUE NO. DATE PLTS. CHG. 900.

APPROVALS

ISSUED FOR

JOB NO.

2323



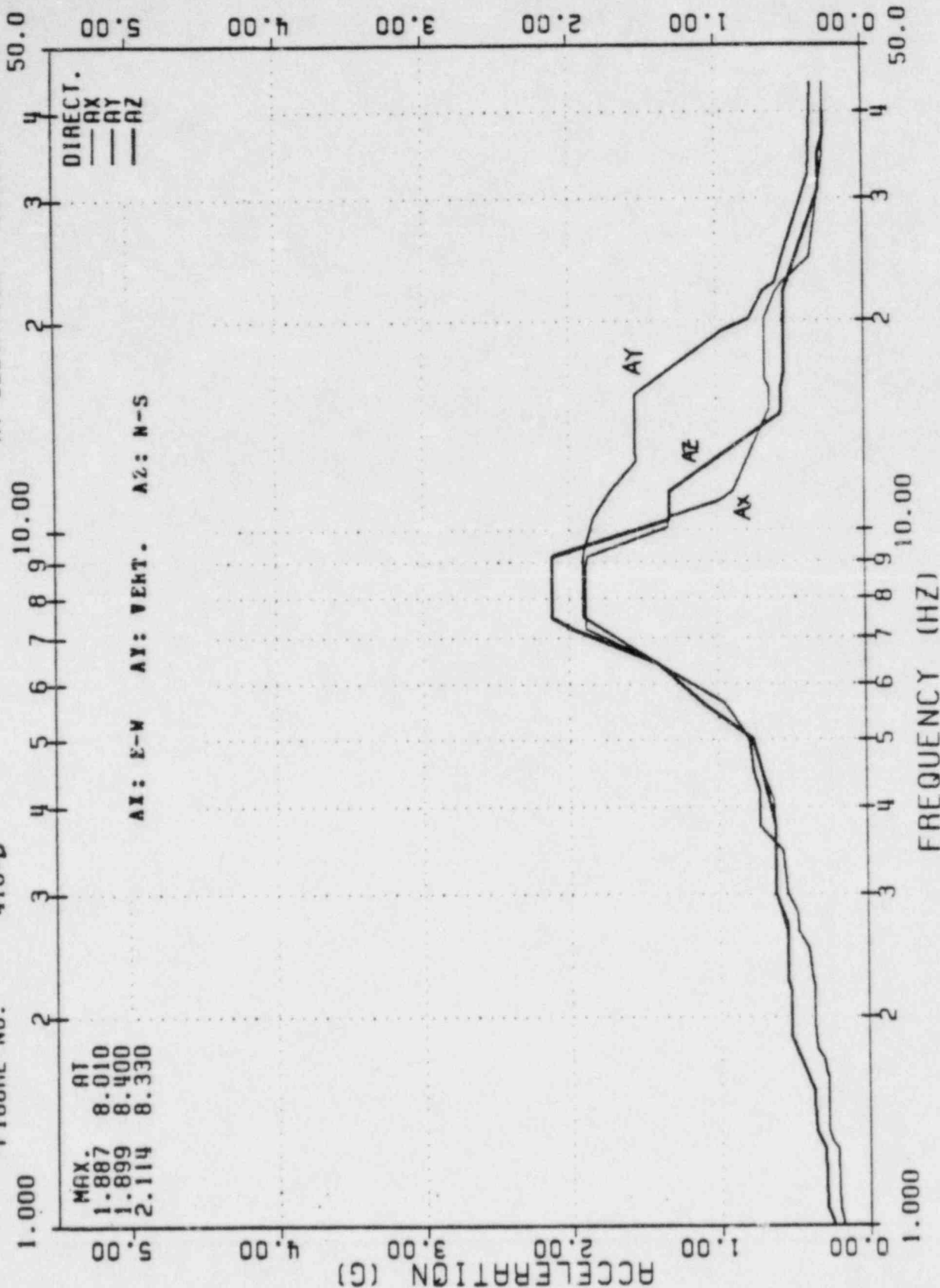
# TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

FLOOR RESPONSE SPECTRA FOR SSE;

FIGURE NO. 418-B

DAMPING = 0.03

AT ELEVATION 841.00



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

FIGURE-418-B

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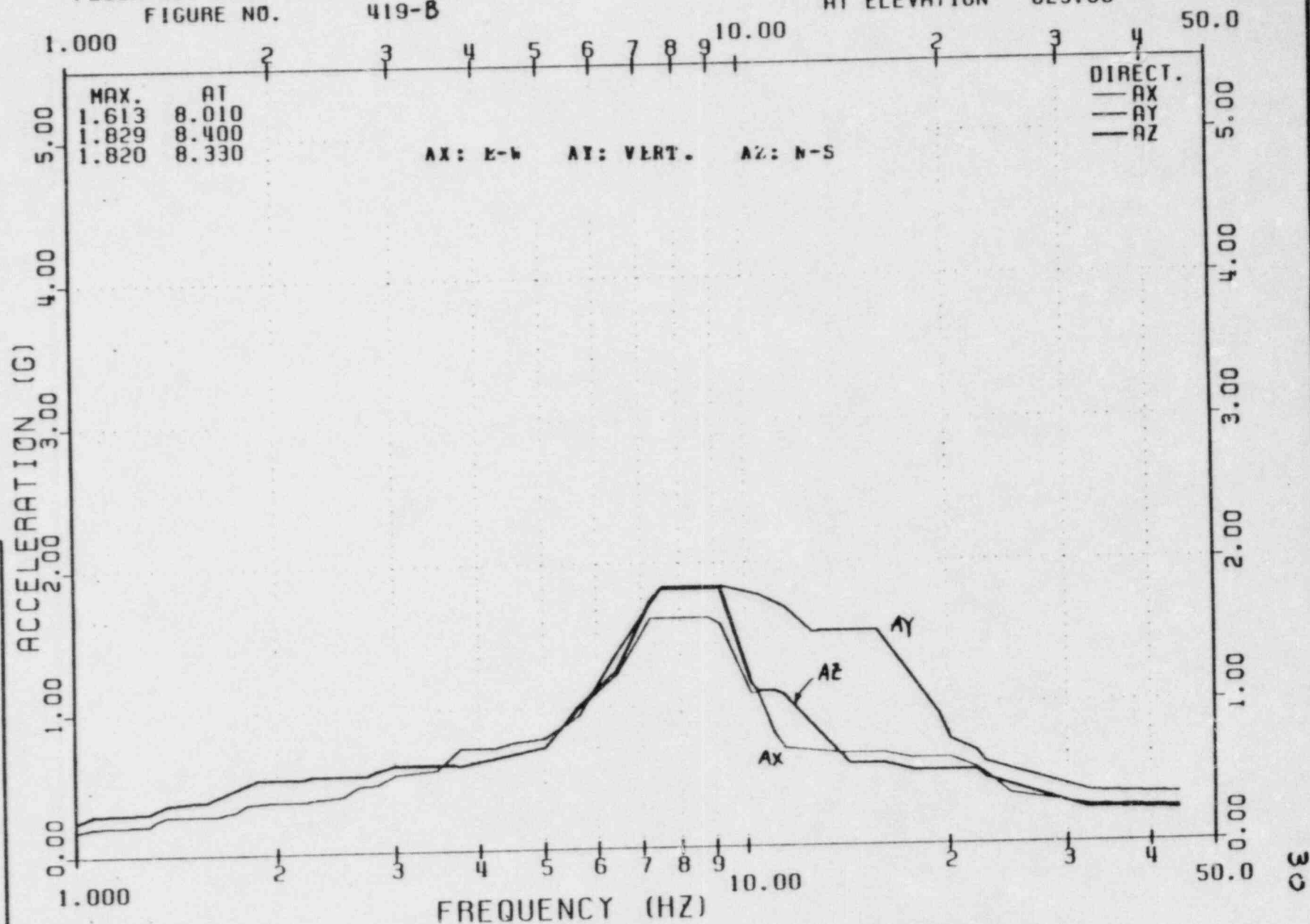
APPROVALS

ISSUED FOR

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE;  
FIGURE NO. 419-8

DAMPING = 0.03

AT ELEVATION 825.00



TUSI-FUEL BUILDING

REFINED RESPONSE SPECTRA

GIBBS & HILL, INC.

ENGINEERS, DESIGNERS, CONSTRUCTORS

JOB NO. 2323

FIGURE-419-8

STATION	AT ELEVATION	810.50
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TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.01  
FIGURE NO. 433-B DIRECTION 1 AT ELEVATION 918.00

FIGURE NO.	BROADENED SPECTRUM FOR NODE= 433	DEGREE OF FREEDOM =	NUMBER OF GRIDS = 42	DAMPING VALUE =	SET NO. =	NO. OF SPECTRA =
1	0.9000	0.9450	1.0100	0.14010	4	0.19120
5	1.1250	1.3120	1.3230	0.21260	8	0.29170
9	1.4040	1.6872	1.7280	0.34490	12	0.42400
13	1.9530	2.0961	2.1420	0.47510	16	0.47510
17	2.8170	2.9970	3.6630	0.57660	20	0.53390
21	4.1086	4.5000	5.1066	0.92570	24	1.37840
25	6.4260	7.2090	7.4970	3.67150	28	3.96420
29	8.3340	8.5320	10.4280	4.79660	32	3.42010
33	11.4070	14.6630	15.1085	1.13160	36	1.13160
37	19.2940	22.6380	24.6620	32.4349	40	0.37840
41	34.8150	44.0000				

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.01  
FIGURE NO. 434-B DIRECTION 1 AT ELEVATION 899.50

FIGURE NO.	BROADENED SPECTRUM FOR NODE= 434	DEGREE OF FREEDOM =	NUMBER OF GRIDS = 44	DAMPING VALUE =	SET NO. =	NO. OF SPECTRA =
1	0.9000	0.9450	1.0099	0.13950	4	0.19070
5	1.1250	1.3122	1.3230	0.21130	8	0.29020
9	1.4040	1.6881	1.7280	0.34190	12	0.42010
13	1.9530	2.0966	2.1420	0.46910	16	0.46910
17	2.8170	2.9970	3.6630	0.56370	20	0.51680
21	4.1100	4.5000	5.1243	0.88620	24	1.28540
25	6.4260	7.2090	7.4970	3.36250	28	3.62730
29	8.3589	8.5320	10.4280	4.21490	32	2.95350
33	11.4070	14.6630	15.1219	0.94190	36	0.94190
37	19.2940	20.0750	22.0000	0.76410	40	0.72630
41	24.6620	32.4848	34.8150	0.32660	44	0.30330

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.01  
FIGURE NO. 435-B DIRECTION 1 AT ELEVATION 860.00

FIGURE NO.	BROADENED SPECTRUM FOR NODE= 435	DEGREE OF FREEDOM =	NUMBER OF GRIDS = 40	DAMPING VALUE =	SET NO. =	NO. OF SPECTRA =
1	0.9000	0.9450	1.0104	0.13770	4	0.16910
5	1.1250	1.3131	1.3230	0.20660	8	0.28490
9	1.4040	1.6911	1.7280	0.33120	12	0.40620
13	1.9530	2.0990	2.1420	0.44590	16	0.44590
17	2.8261	2.8170	2.9970	0.51390	20	0.51390
21	3.7808	4.1158	4.5000	0.72280	24	0.72280
25	6.4260	7.4970	7.5600	2.01120	28	2.01120
29	9.6711	10.4280	11.0000	1.14220	32	1.00050
33	14.0091	20.0750	22.6380	0.42540	36	0.30650
37	31.3535	32.5490	34.5648	0.17493	40	0.17493

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.01

FIGURE NO.	BROADENED SPECTRUM FOR NODE= 436	DEGREE OF FREEDOM =	NUMBER OF GRIDS = 40	DAMPING VALUE =	SET NO. =	NO. OF SPECTRA =
1	0.9000	0.9450	1.0104	0.13770	4	0.16910
5	1.1250	1.3131	1.3230	0.20660	8	0.28490
9	1.4040	1.6911	1.7280	0.33120	12	0.40620
13	1.9530	2.0990	2.1420	0.44590	16	0.44590
17	2.8261	2.8170	2.9970	0.51390	20	0.51390
21	3.7808	4.1158	4.5000	0.72280	24	0.72280
25	6.4260	7.4970	7.5600	2.01120	28	2.01120
29	9.6711	10.4280	11.0000	1.14220	32	1.00050
33	14.0091	20.0750	22.6380	0.42540	36	0.30650
37	31.3535	32.5490	34.5648	0.17493	40	0.17493



NO. OF SPECTRA = 1

FIGURE NO. 436-B DIRECTION 1 AT ELEVATION 841.00

BROADENED SPECTRUM FOR NODE= 436			DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 42		DAMPING VALUE = 0.010	
1	0.9000	0.13130	2	0.9450	0.13730	3	1.0103	0.13730
5	1.1250	0.19540	6	1.3131	0.19540	7	1.3230	0.20540
9	1.4040	0.28950	10	1.6920	0.28950	11	1.7280	0.32830
13	1.9530	0.40600	14	2.0999	0.40600	15	2.1420	0.43940
17	2.6292	0.42950	18	2.8170	0.42950	19	2.9970	0.50000
21	3.7923	0.43150	22	4.1176	0.43150	23	4.5000	0.67680
25	7.4970	1.49100	25	7.5600	1.57260	27	9.2400	1.57260
29	10.4280	1.39280	30	11.0000	0.84430	31	11.4070	0.72040
33	16.0160	0.53430	34	19.2940	0.51330	35	20.0750	0.49490
37	24.6620	0.27150	38	31.0865	0.16840	39	32.5490	0.16840
41	37.1580	0.14790	42	44.0000	0.14620	40	34.7376	0.14790

SET NO. = 13

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.01  
FIGURE NO. 437-B DIRECTION 1 AT ELEVATION 825.00

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 437			DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 43		DAMPING VALUE = 0.010	
1	0.9000	0.13100	2	0.9450	0.13700	3	1.0102	0.13700
5	1.1250	0.19490	6	1.3133	0.19490	7	1.3230	0.20460
9	1.4040	0.28860	10	1.6928	0.28860	11	1.7280	0.32610
13	1.9530	0.40250	14	2.1006	0.40250	15	2.1420	0.43470
17	2.6317	0.42270	18	2.8170	0.42270	19	2.9970	0.48940
21	3.8019	0.41710	22	4.1188	0.41710	23	4.5000	0.64300
25	5.6250	0.73250	26	7.5600	1.29980	27	9.2400	1.29980
29	10.4280	1.09190	30	11.0000	0.64970	31	11.4070	0.54360
33	13.1040	0.56610	34	16.0160	0.56610	35	19.2940	0.48830
37	22.6380	0.36900	38	24.6620	0.23710	39	31.5149	0.14780
41	34.5232	0.13730	42	37.1580	0.13730	43	44.0000	0.13320

SET NO. = 16

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.01  
FIGURE NO. 438-B DIRECTION 1 AT ELEVATION 810.50

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 438			DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 41		DAMPING VALUE = 0.010	
1	0.9000	0.13080	2	0.9450	0.13680	3	1.0102	0.13680
5	1.1250	0.19430	6	1.3132	0.19430	7	1.3230	0.20380
9	1.4040	0.28780	10	1.6935	0.28780	11	1.7280	0.32420
13	1.9530	0.39940	14	2.1014	0.39940	15	2.1420	0.43040
17	2.6342	0.41630	18	2.8170	0.41630	19	2.9970	0.48000
21	3.8109	0.40410	22	4.1203	0.40410	23	4.5000	0.61260
25	5.6250	0.66890	26	7.5600	1.07310	27	9.2400	1.07310
29	11.0000	0.50160	30	11.2233	0.50160	31	11.9970	0.52520
33	13.1040	0.58720	34	16.0160	0.58720	35	19.2940	0.44110
37	22.0000	0.34640	38	22.6380	0.32900	39	24.6620	0.21880
41	44.0000	0.12700				40	32.5490	0.13310

SET NO. = 2

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.01  
FIGURE NO. 433-B DIRECTION 2 AT ELEVATION 918.00

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 433			DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 40		DAMPING VALUE = 0.010	
1	0.9000	0.09650	2	0.9450	0.09670	3	1.0034	0.09670
5	1.1250	0.13940	6	1.2903	0.13940	7	1.3230	0.15870
9	1.7073	0.20500	10	1.8000	0.26430	11	1.8720	0.26900
13	2.1420	0.28390	14	2.4526	0.28390	15	2.5020	0.31380
						16	2.6497	0.31380



17	2.9970	0.45380	18	3.5952	0.45380	19	3.7530	0.57000	20	4.3418	0.57000
21	4.5000	0.66390	22	5.4275	0.66390	23	6.4260	1.11160	24	7.2090	1.30690
25	7.5600	1.60250	26	8.5320	1.89170	27	10.4280	1.89170	28	10.7697	1.83430
29	12.6276	1.83430	30	12.7800	1.98170	31	15.6200	1.98170	32	15.6420	1.95610
33	16.0160	1.51020	34	19.2940	0.82460	35	22.0000	0.67750	36	22.3985	0.55410
37	24.6620	0.55410	38	28.0316	0.44930	39	37.1580	0.44930	40	44.0000	0.44930

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.01  
FIGURE NO. 434-B DIRECTION 2 AT ELEVATION 899.50

SET NO. = 5

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 434			DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 42		DAMPING VALUE = 0.010	
1	0.9000	0.09640	2	0.9450	0.09670	3	1.0036	0.09670
5	1.1250	0.13940	6	1.2906	0.13940	7	1.3230	0.15880
9	1.7070	0.20500	10	1.8000	0.26470	11	1.8720	0.26950
13	2.1420	0.28470	14	2.4524	0.28470	15	2.5020	0.31490
17	2.9970	0.45740	18	3.5951	0.45740	19	3.7530	0.57440
21	4.5000	0.67510	22	5.4292	0.67510	23	5.6250	0.76670
25	7.2090	1.46810	26	7.5600	1.85770	27	8.4262	1.85770
29	9.3261	1.23470	30	9.3330	1.96250	31	11.4070	1.96250
33	15.6200	1.92800	34	15.6420	1.90550	35	16.0160	1.51320
37	22.0000	0.71610	38	22.5518	0.56270	39	24.6620	0.56270
41	37.1580	0.39110	42	44.0000	0.39110	40	29.3193	0.39110

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.01  
FIGURE NO. 435-B DIRECTION 2 AT ELEVATION 860.00

SET NO. = 8

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 435			DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 38		DAMPING VALUE = 0.010	
1	0.9000	0.09640	2	0.9450	0.09660	3	1.0036	0.09660
5	1.1250	0.13960	6	1.2912	0.13960	7	1.3230	0.15850
9	1.7077	0.20470	10	1.8000	0.26380	11	1.8720	0.26820
13	2.1420	0.28320	14	2.4533	0.28320	15	2.5020	0.31250
17	2.9970	0.45160	18	3.5981	0.45160	19	3.7530	0.56330
21	4.5000	0.65540	22	5.4141	0.65540	23	6.4260	1.11060
25	7.5600	1.73010	26	9.3217	1.73010	27	9.3330	1.77380
29	11.9263	1.64030	30	15.6200	1.64030	31	16.0160	1.26300
33	22.0000	0.53370	34	22.6380	0.40900	35	24.6620	0.40180
37	34.8150	0.20720	38	44.0000	0.18710	36	32.5490	0.21270

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.01  
FIGURE NO. 436-B DIRECTION 2 AT ELEVATION 841.00

SET NO. = 11

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 436			DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 38		DAMPING VALUE = 0.010	
1	0.9000	0.09640	2	0.9450	0.09650	3	1.0034	0.09650
5	1.1250	0.13930	6	1.2908	0.13930	7	1.3230	0.15830
9	1.7077	0.20450	10	1.8000	0.26340	11	1.8720	0.26780
13	2.1420	0.28260	14	2.4533	0.28260	15	2.5020	0.31190
17	2.9970	0.45030	18	3.5985	0.45030	19	3.7530	0.56160
21	4.5000	0.65060	22	5.4394	0.65060	23	6.4260	1.07330
25	7.5600	1.59400	26	9.3188	1.59400	27	9.3330	1.64510
29	11.6486	1.58570	30	15.6200	1.58570	31	16.0160	1.17130
33	20.1080	0.54040	34	22.0000	0.47840	35	22.6323	0.34230
37	32.5490	0.18920	38	44.0000	0.17670	36	24.6620	0.34230

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;

SET NO. = 14

FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.01			
FIGURE NO.	437-B	DIRECTION 2	AT ELEVATION 825.00
BROADENED SPECTRUM FOR MODE= 437			
	DEGREE OF FREEDOM = 2	NUMBER OF GRIDS = 38	NO. OF SPECTRA = 1
1	0.9000	0.09650	DAMPING VALUE = 0.010
5	1.1250	0.13930	4 1.0620 0.13600
9	1.7078	0.20440	8 1.3680 0.20440
13	2.1420	0.28220	12 2.0643 0.26760
17	2.9970	0.44910	16 2.6507 0.31130
21	4.5000	0.64650	20 4.3485 0.55990
25	7.5600	1.52560	24 7.2090 1.21340
29	11.5392	1.54950	28 11.4070 1.58060
33	20.1080	0.51530	32 19.2940 0.57830
37	32.5490	0.18360	36 24.6620 0.31380

SET NO. = 17

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;			
FIGURE NO.	438-B	DIRECTION 2	AT ELEVATION 810.50
BROADENED SPECTRUM FOR MODE= 438			
	DEGREE OF FREEDOM = 2	NUMBER OF GRIDS = 39	NO. OF SPECTRA = 1
1	0.9000	0.09630	DAMPING VALUE = 0.010
5	1.1250	0.13920	4 1.0620 0.13600
9	1.7083	0.20400	8 1.3680 0.20400
13	2.1420	0.28080	12 2.0650 0.26650
17	2.9970	0.44460	16 2.6527 0.30940
21	4.5000	0.63220	20 4.3564 0.55260
25	7.5600	1.37260	24 7.2090 1.09870
29	11.4070	1.47090	28 9.3330 1.47090
33	19.2940	0.52120	32 16.0160 1.04860
37	32.5490	0.27060	36 22.6380 0.29220

SET NO. = 3

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;			
FIGURE NO.	433-B	DIRECTION 3	AT ELEVATION 918.00
BROADENED SPECTRUM FOR MODE= 433			
	DEGREE OF FREEDOM = 3	NUMBER OF GRIDS = 43	NO. OF SPECTRA = 1
1	0.9000	0.13310	DAMPING VALUE = 0.010
5	1.1250	0.19970	4 1.0620 0.19040
9	1.4040	0.29750	8 1.3680 0.28980
13	1.9530	0.42810	12 1.8720 0.42140
17	2.8170	0.47040	16 2.7747 0.46320
21	4.1061	0.50630	20 3.7646 0.50630
25	7.2090	2.79200	24 6.4260 1.79720
29	9.3720	3.57530	28 9.2400 3.73390
33	15.9479	1.07230	32 15.6200 1.16310
37	22.6380	1.09330	36 22.0000 1.13080
41	34.8150	0.39440	40 32.4833 0.39440

SET NO. = 6

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;			
FIGURE NO.	434-B	DIRECTION 3	AT ELEVATION 899.50
BROADENED SPECTRUM FOR MODE= 434			
	DEGREE OF FREEDOM = 3	NUMBER OF GRIDS = 38	NO. OF SPECTRA = 1
1	0.9000	0.13280	DAMPING VALUE = 0.010
5	1.1250	0.19880	4 1.0620 0.19010
9	1.4040	0.29600	8 1.3680 0.28850
13	1.9530	0.42280	12 1.8720 0.41700
17	2.8170	0.46020	16 2.7954 0.45660
21	4.1061	0.54820	20 3.7725 0.48590

21	4.1080	0.48590	22	4.5000	0.80280	23	5.1830	0.80280	24	6.4260	1.58060
25	7.2090	2.41220	26	7.5600	3.17690	27	9.2400	3.17690	28	9.4772	2.91500
29	11.4070	2.91500	30	14.6630	1.03700	31	15.6200	0.88090	32	16.0160	0.76460
33	19.3515	0.69810	34	22.6380	0.69810	35	24.6620	0.43500	36	32.5155	0.30010
37	34.8150	0.30010	38	44.0000	0.28590						

SET NO. = 9

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AZ ; DAMPING = 0.01  
FIGURE NO. 435-B DIRECTION 3 AT ELEVATION 860.00

BROADENED SPECTRUM FOR NODE= 435											
FIGURE NO.	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	NO. OF SPECTRA	SET NO.	FIGURE NO.	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	NO. OF SPECTRA	SET NO.
1	0.9000	0.13160	2	0.9450	3	1	0.9000	0.13160	2	0.9450	3
5	1.1250	0.19620	6	1.3127	7	5	1.1250	0.19620	6	1.3127	7
9	1.4040	0.29150	10	1.6921	11	9	1.4040	0.29150	10	1.6921	11
13	1.9530	0.41020	14	2.1010	15	13	1.9530	0.41020	14	2.1010	15
17	2.6229	0.43750	18	2.8170	19	17	2.6229	0.43750	18	2.8170	19
21	3.7901	0.44240	22	4.1126	23	21	3.7901	0.44240	22	4.1126	23
25	5.6250	0.85490	26	6.4260	27	25	5.6250	0.85490	26	6.4260	27
29	9.2400	2.09450	30	9.6678	31	29	9.2400	2.09450	30	9.6678	31
33	14.8059	0.42550	34	16.0160	35	33	14.8059	0.42550	34	16.0160	35
37	24.6620	0.34380	38	31.3900	39	37	24.6620	0.34380	38	31.3900	39
41	40.0000	0.17287				41	40.0000	0.17287			

SET NO. = 12

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AZ ; DAMPING = 0.01  
FIGURE NO. 436-B DIRECTION 3 AT ELEVATION 841.00

BROADENED SPECTRUM FOR NODE= 436											
FIGURE NO.	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	NO. OF SPECTRA	SET NO.	FIGURE NO.	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	NO. OF SPECTRA	SET NO.
1	0.9000	0.13130	2	0.9450	3	1	0.9000	0.13130	2	0.9450	3
5	1.1250	0.19560	6	1.3128	7	5	1.1250	0.19560	6	1.3128	7
9	1.4040	0.29050	10	1.6926	11	9	1.4040	0.29050	10	1.6926	11
13	1.9530	0.40710	14	2.1013	15	13	1.9530	0.40710	14	2.1013	15
17	2.6253	0.43170	18	2.8170	19	17	2.6253	0.43170	18	2.8170	19
21	3.7946	0.43130	22	4.1141	23	21	3.7946	0.43130	22	4.1141	23
25	5.6250	0.79540	26	6.4260	27	25	5.6250	0.79540	26	6.4260	27
29	9.2400	1.83740	30	9.9207	31	29	9.2400	1.83740	30	9.9207	31
33	16.0160	0.46020	34	17.4109	35	33	16.0160	0.46020	34	17.4109	35
37	31.6454	0.16930	38	34.8150	39	37	31.6454	0.16930	38	34.8150	39

SET NO. = 15

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AZ ; DAMPING = 0.01  
FIGURE NO. 437-B DIRECTION 3 AT ELEVATION 825.00

BROADENED SPECTRUM FOR NODE= 437											
FIGURE NO.	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	NO. OF SPECTRA	SET NO.	FIGURE NO.	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	NO. OF SPECTRA	SET NO.
1	0.9000	0.13110	2	0.9450	3	1	0.9000	0.13110	2	0.9450	3
5	1.1250	0.19520	6	1.3131	7	5	1.1250	0.19520	6	1.3131	7
9	1.4040	0.28970	10	1.6932	11	9	1.4040	0.28970	10	1.6932	11
13	1.9530	0.40400	14	2.1018	15	13	1.9530	0.40400	14	2.1018	15
17	2.6280	0.42560	18	2.8170	19	17	2.6280	0.42560	18	2.8170	19
21	3.8018	0.41890	22	4.1157	23	21	3.8018	0.41890	22	4.1157	23
25	5.6250	0.73200	26	6.4260	27	25	5.6250	0.73200	26	6.4260	27
29	9.2400	1.56770	30	9.9853	31	29	9.2400	1.56770	30	9.9853	31
33	16.0160	0.49620	34	18.1449	35	33	16.0160	0.49620	34	18.1449	35
37	24.6620	0.32470	38	31.8748	39	37	24.6620	0.32470	38	31.8748	39
41	44.0000	0.11840				41	44.0000	0.11840			

SET NO. = 18

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;



TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.02  
FIGURE NO. 439-B DIRECTION 1 AT ELEVATION 918.00

FIGURE NO.	439-B	DIRECTION	1	AT ELEVATION	918.00	NO. OF SPECTRA =	1	SET NO. =	1
BROADENED SPECTRUM FOR MODE=	439	DEGREE OF FREEDOM =	1	NUMBER OF GRIDS =	38	DAMPING VALUE =	0.020		
1	0.9000	0.12530	2	0.9450	0.13130	4	1.0620	0.16540	
5	1.2910	0.16540	6	1.3680	0.22440	8	1.6110	0.23020	
9	1.8720	0.34120	10	2.1029	0.35350	12	2.6258	0.35350	
13	2.8170	0.38000	14	2.9970	0.43930	16	3.7530	0.44620	
17	4.0950	0.44900	18	4.5000	0.62810	20	6.4260	1.73250	
21	7.2090	2.81140	22	7.5600	3.06110	24	8.5320	3.55660	
25	10.4280	3.55660	26	11.0000	2.62490	28	14.6630	1.06270	
29	15.6420	0.86770	30	16.0160	0.86510	32	20.0750	0.80270	
33	22.0000	0.76780	34	22.6380	0.70930	36	32.5490	0.37310	
37	34.8150	0.37310	38	44.0000	0.34400				

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.02  
FIGURE NO. 440-B DIRECTION 1 AT ELEVATION 899.50

FIGURE NO.	440-B	DIRECTION	1	AT ELEVATION	899.50	NO. OF SPECTRA =	1	SET NO. =	4
BROADENED SPECTRUM FOR MODE=	440	DEGREE OF FREEDOM =	1	NUMBER OF GRIDS =	37	DAMPING VALUE =	0.020		
1	0.9000	0.12490	2	0.9450	0.13070	4	1.0620	0.16490	
5	1.2915	0.16490	6	1.3680	0.22310	8	1.6110	0.22770	
9	1.8720	0.33790	10	2.1073	0.33790	12	2.6315	0.34830	
13	2.8170	0.37450	14	2.9970	0.42920	16	3.7530	0.43180	
17	4.0950	0.43310	18	4.5000	0.60110	20	6.4260	1.59390	
21	7.2090	2.58690	22	7.5600	2.80180	24	8.5320	3.12370	
25	10.4280	3.12370	26	11.0000	2.26700	28	14.6630	0.89820	
29	15.4792	0.74490	30	16.0160	0.74490	32	22.0000	0.69450	
33	22.6180	0.65060	34	24.6620	0.46290	36	34.8150	0.32730	
37	44.0000	0.30310	35						

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.02  
FIGURE NO. 441-B DIRECTION 1 AT ELEVATION 860.00

FIGURE NO.	441-B	DIRECTION	1	AT ELEVATION	860.00	NO. OF SPECTRA =	1	SET NO. =	7
BROADENED SPECTRUM FOR MODE=	441	DEGREE OF FREEDOM =	1	NUMBER OF GRIDS =	38	DAMPING VALUE =	0.020		
1	0.9000	0.12350	2	0.9450	0.12900	4	1.0620	0.16340	
5	1.2933	0.16340	6	1.3680	0.21940	8	1.6650	0.23430	
9	1.7280	0.26960	10	1.8720	0.32510	12	2.1420	0.32920	
13	2.6358	0.32920	14	2.8170	0.35040	16	3.6630	0.39010	
17	3.7456	0.37590	18	3.7530	0.37590	20	4.5000	0.48740	
21	5.0455	6.48740	22	5.6250	0.73850	24	7.2090	1.50100	
25	7.4970	1.56110	26	7.5600	1.56220	28	9.8631	1.35920	
29	10.4280	1.35920	30	11.0000	0.91080	32	20.0750	0.42710	
33	22.6380	0.35110	34	24.6620	0.25680	36	32.5490	0.17470	
37	37.1580	0.16410	38	44.0000	0.16360				

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.02  
FIGURE NO. 442-B DIRECTION 1 AT ELEVATION 841.00

FIGURE NO.	442-B	DIRECTION	1	AT ELEVATION	841.00	NO. OF SPECTRA =	1	SET NO. =	10
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BROADENED SPECTRUM FOR NODE= 442						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 41		DAMPING VALUE = 0.020	
1	0.9000	0.12310	2	0.9450	0.12850	3	1.0055	0.12850	4	1.0620	0.16300
5	1.2934	0.16300	6	1.3680	0.21850	7	1.6116	0.21850	8	1.6650	0.23260
9	1.7280	0.26710	10	1.8720	0.32170	11	2.1306	0.32170	12	2.1420	0.32430
13	2.6406	0.32430	14	2.8170	0.34370	15	2.9970	0.37900	16	3.6630	0.37900
17	3.7419	0.36120	18	3.7530	0.36120	19	4.0950	0.36140	20	4.5000	0.45560
21	5.0864	0.45560	22	5.6250	0.65100	23	6.4260	0.86290	24	7.2090	1.20110
25	7.4970	1.23880	26	9.1630	1.23880	27	9.2400	1.22610	28	9.9800	1.01720
29	10.4280	1.01720	30	11.0000	0.68750	31	11.4070	0.59160	32	13.8825	0.42570
33	16.0160	0.42570	34	17.1015	0.41450	35	20.0750	0.41450	36	22.6380	0.34280
37	24.6620	0.22340	38	32.5490	0.15960	39	34.2500	0.14870	40	37.1580	0.14870
41	44.0000	0.14620									

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.02  
FIGURE NO. 443-B DIRECTION 1 AT ELEVATION 825.00

SET NO. = 13

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 443						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 37		DAMPING VALUE = 0.020	
1	0.9000	0.12290	2	0.9450	0.12830	3	1.0055	0.12830	4	1.0620	0.16280
5	1.2932	0.16280	6	1.3680	0.21790	7	1.6169	0.21790	8	1.7280	0.26520
9	1.8720	0.31920	10	2.1351	0.31920	11	2.1420	0.32070	12	2.7182	0.32070
13	2.8170	0.33940	14	2.9970	0.37080	15	3.6630	0.37080	16	3.7553	0.34980
17	4.0969	0.34980	18	4.5000	0.43240	19	5.1242	0.43240	20	5.6250	0.58880
21	6.4260	0.75630	22	7.2090	1.01000	23	7.4970	1.03360	24	9.1630	1.03360
25	9.2400	1.01500	26	10.0773	0.81530	27	10.4280	0.81530	28	11.0000	0.53970
29	11.3740	0.45440	30	11.7816	0.44500	31	16.0160	0.44500	32	18.6285	0.37310
33	20.0750	0.37310	34	22.6380	0.30750	35	24.6620	0.20530	36	32.5490	0.14200
37	44.0000	0.13380									

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AX ; DAMPING = 0.02  
FIGURE NO. 444-B DIRECTION 1 AT ELEVATION 810.50

SET NO. = 16

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 444						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 39		DAMPING VALUE = 0.020	
1	0.9000	0.12270	2	0.9450	0.12800	3	1.0052	0.12800	4	1.0620	0.16260
5	1.2929	0.16260	6	1.3680	0.21730	7	1.6188	0.21730	8	1.7280	0.26350
9	1.8720	0.31690	10	2.1392	0.31690	11	2.1420	0.31750	12	2.7224	0.31750
13	2.8170	0.33540	14	2.9970	0.36340	15	3.6630	0.36340	16	3.7675	0.33950
17	4.1003	0.33950	18	4.5000	0.41160	19	5.1637	0.41160	20	5.6250	0.53470
21	6.4260	0.66530	22	7.2090	0.86240	23	8.8110	0.86240	24	9.1630	0.86200
25	10.1596	0.65500	26	10.4280	0.65500	27	11.0000	0.41790	28	11.1106	0.40410
29	12.8025	0.40410	30	13.1040	0.44640	31	16.0160	0.44640	32	19.0143	0.33120
33	20.0750	0.33120	34	22.0000	0.29900	35	22.6380	0.27540	36	24.6620	0.19830
37	32.5490	0.13240	38	34.8150	0.13150	39	44.0000	0.12520			

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.02  
FIGURE NO. 439-B DIRECTION 2 AT ELEVATION 918.00

SET NO. = 2

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 439						DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 43		DAMPING VALUE = 0.020	
1	0.9000	0.08920	2	0.9450	0.08960	3	0.9990	0.08970	4	1.0620	0.11450
5	1.1250	0.11840	6	1.2920	0.11840	7	1.3230	0.14160	8	1.3680	0.16560
9	1.6674	0.16560	10	1.8000	0.20830	11	2.0430	0.21620	12	2.4013	0.21620
13	2.5020	0.23900	14	2.6460	0.26960	15	2.8170	0.28400	16	2.9970	0.33180
17	3.4972	0.33180	18	3.7530	0.45220	19	4.3762	0.45220	20	4.5000	0.47740
21	5.1547	0.47740	22	5.6250	0.58100	23	6.4260	0.88420	24	7.5600	1.24670
25	8.3340	1.36010	26	8.5320	1.46820	27	10.4280	1.46820	28	10.8478	1.32940
29	11.3740	1.32940	30	11.4070	1.32650	31	11.5046	1.31430	32	12.7800	1.31430

33	12.7980	1.31560	34	15.6420	1.31560	35	16.0160	1.13680	36	19.2940	0.69820
37	20.1080	0.58220	38	22.0000	0.52960	39	22.5947	0.45140	40	24.6620	0.45140
41	28.2678	0.37050	42	37.1580	0.37050	43	44.0000	0.37050			

SET NO. = 5

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.02  
FIGURE NO. 440-B DIRECTION 2 AT ELEVATION 899.50

BROADENED SPECTRUM FOR NODE= 440											
FIGURE NO.	440-B	DIRECTION	2	DEGREE OF FREEDOM	2	NUMBER OF GRIDS	41	DAMPING VALUE	0.020	NO. OF SPECTRA	1
1	0.9000	0.08920	2	0.9450	0.08960	3	0.9990	0.08960	0.11430		
5	1.1250	0.11840	6	1.2924	0.11840	7	1.3230	0.14170	0.16560		
9	1.6661	0.16560	10	1.8000	0.20900	11	2.0430	0.21630	0.21630		
13	2.5020	0.24040	14	2.6460	0.27090	15	2.8170	0.28440	0.33400		
17	3.4973	0.33400	18	3.7530	0.45560	19	4.3567	0.45560	0.48590		
21	5.1132	0.48590	22	5.6250	0.61440	23	7.5600	1.44320	1.44320		
25	8.5320	1.48580	26	10.4280	1.48580	27	10.6976	1.41610	1.41610		
29	12.3478	1.27950	30	12.7800	1.27950	31	12.7980	1.28310	1.28310		
33	16.0160	1.14750	34	19.2940	0.72390	35	20.1080	0.60940	0.55110		
37	22.6380	0.48300	38	24.6620	0.72390	39	29.0218	0.33750	0.33750		
41	44.0000	0.33750			0.46500						

SET NO. = 8

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.02  
FIGURE NO. 441-B DIRECTION 2 AT ELEVATION 860.00

BROADENED SPECTRUM FOR NODE= 441											
FIGURE NO.	441-B	DIRECTION	2	DEGREE OF FREEDOM	2	NUMBER OF GRIDS	40	DAMPING VALUE	0.020	NO. OF SPECTRA	1
1	0.9000	0.08920	2	0.9450	0.08960	3	0.9990	0.08960	0.11430		
5	1.1250	0.11850	6	1.2930	0.11850	7	1.3230	0.14130	0.16530		
9	1.6676	0.16530	10	1.8000	0.20780	11	2.0430	0.21550	0.21550		
13	2.5020	0.23800	14	2.6460	0.26770	15	2.8170	0.28210	0.32970		
17	3.4983	0.32970	18	3.7530	0.44670	19	4.3747	0.44670	0.47170		
21	5.1382	0.47170	22	5.6250	0.58420	23	7.5600	1.33740	1.33740		
25	9.3955	1.32100	26	10.4280	1.32100	27	10.6594	1.26720	1.26720		
29	12.5962	1.09370	30	12.7800	1.09370	31	12.7980	1.09520	1.09520		
33	16.0160	0.96470	34	19.2940	0.56840	35	20.1080	0.47880	0.41790		
37	22.6380	0.37520	38	24.6620	0.34500	39	32.5490	0.20640	0.18760		

SET NO. = 11

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.02  
FIGURE NO. 442-B DIRECTION 2 AT ELEVATION 841.00

BROADENED SPECTRUM FOR NODE= 442											
FIGURE NO.	442-B	DIRECTION	2	DEGREE OF FREEDOM	2	NUMBER OF GRIDS	40	DAMPING VALUE	0.020	NO. OF SPECTRA	1
1	0.9000	0.08910	2	0.9450	0.08950	3	0.9990	0.08950	0.11430		
5	1.1250	0.11830	6	1.2927	0.11830	7	1.3230	0.14120	0.16520		
9	1.6679	0.16520	10	1.8000	0.20740	11	2.0430	0.21520	0.21520		
13	2.5020	0.23740	14	2.6460	0.26700	15	2.8170	0.28150	0.32870		
17	3.4985	0.32870	18	3.7530	0.44530	19	4.3842	0.44530	0.46800		
21	5.1575	0.46800	22	5.6250	0.56850	23	7.5600	1.23540	1.23540		
25	9.5384	1.19790	26	10.4280	1.19790	27	10.5746	1.16940	1.16940		
29	12.2796	1.04470	30	12.7800	1.04470	31	12.7980	1.04580	1.04580		
33	16.0160	0.89410	34	19.2940	0.52420	35	20.1080	0.42890	0.37670		
37	22.6380	0.32260	38	24.6620	0.30210	39	32.5490	0.18830	0.17690		

SET NO. = 14

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.02  
FIGURE NO. 443-B DIRECTION 2 AT ELEVATION 825.00

BROADENED SPECTRUM FOR NODE= 443											
FIGURE NO.	443-B	DIRECTION	2	DEGREE OF FREEDOM	2	NUMBER OF GRIDS	40	DAMPING VALUE	0.020	NO. OF SPECTRA	1
1	0.9000	0.08910	2	0.9450	0.08950	3	0.9990	0.08950	0.11430		
5	1.1250	0.11830	6	1.2927	0.11830	7	1.3230	0.14120	0.16520		
9	1.6679	0.16520	10	1.8000	0.20740	11	2.0430	0.21520	0.21520		
13	2.5020	0.23740	14	2.6460	0.26700	15	2.8170	0.28150	0.32870		
17	3.4985	0.32870	18	3.7530	0.44530	19	4.3842	0.44530	0.46800		
21	5.1575	0.46800	22	5.6250	0.56850	23	7.5600	1.23540	1.23540		
25	9.5384	1.19790	26	10.4280	1.19790	27	10.5746	1.16940	1.16940		
29	12.2796	1.04470	30	12.7800	1.04470	31	12.7980	1.04580	1.04580		
33	16.0160	0.89410	34	19.2940	0.52420	35	20.1080	0.42890	0.37670		
37	22.6380	0.32260	38	24.6620	0.30210	39	32.5490	0.18830	0.17690		

BROADENED SPECTRUM FOR NODE= 443						DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 40		DAMPING VALUE = 0.020		
1	0.9000	0.08910	2	0.9450	0.08950	3	0.9990	0.08950	4	1.0620	0.11420	
5	1.1250	0.11830	6	1.2928	0.11830	7	1.3230	0.14110	8	1.3680	0.16510	
9	1.6684	0.16510	10	1.8000	0.20720	11	2.0430	0.21500	12	2.4047	0.21500	
13	2.5020	0.23680	14	2.6460	0.26640	15	2.8170	0.28100	16	2.9970	0.32800	
17	3.4991	0.32800	18	3.7530	0.44400	19	4.3914	0.44400	20	4.5000	0.46490	
21	5.1692	0.46490	22	5.6250	0.55830	23	7.5600	1.18290	24	9.2400	1.18290	
25	9.6806	1.12770	26	10.4280	1.12770	27	10.4950	1.11930	28	11.4070	1.11930	
29	12.1357	1.01900	30	12.7800	1.01900	31	12.7980	1.01980	32	15.6420	1.01980	
33	16.0160	0.86690	34	19.2940	0.50670	35	20.1080	0.41190	36	22.0000	0.36170	
37	22.6380	0.30920	38	24.6620	0.28470	39	32.5490	0.18370	40	44.0000	0.17340	

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AY ; DAMPING = 0.02  
FIGURE NO. 444-B DIRECTION 2 AT ELEVATION 810.50

SET NO. = 17

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 444						DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 39		DAMPING VALUE = 0.020		
1	0.9000	0.08900	2	0.9450	0.08940	3	0.9990	0.08940	4	1.0620	0.11430	
5	1.1250	0.11820	6	1.2927	0.11820	7	1.3230	0.14080	8	1.3680	0.16470	
9	1.6692	0.16470	10	1.8000	0.20610	11	2.0430	0.21420	12	2.4074	0.21420	
13	2.5020	0.23490	14	2.6460	0.26420	15	2.8170	0.27940	16	2.9970	0.32480	
17	3.4997	0.32480	18	3.7530	0.43820	19	4.4098	0.43820	20	4.5000	0.45470	
21	5.2079	0.45470	22	5.6250	0.53070	23	6.4260	0.77780	24	7.5600	1.07180	
25	8.5133	1.07180	26	8.5320	1.07790	27	10.4280	1.07790	28	11.4070	1.04250	
29	12.0096	0.96730	30	15.6200	0.96730	31	15.6420	0.96600	32	16.0160	0.81280	
33	19.2940	0.46090	34	20.1080	0.37120	35	22.0000	0.32590	36	22.6380	0.28450	
37	32.5490	0.17410	38	37.1580	0.17070	39	44.0000	0.16530				

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AZ ; DAMPING = 0.02  
FIGURE NO. 439-B DIRECTION 3 AT ELEVATION 918.00

SET NO. = 3

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 439						DEGREE OF FREEDOM = 3		NUMBER OF GRIDS = 39		DAMPING VALUE = 0.020		
1	0.9000	0.12490	2	0.9450	0.13130	3	1.0068	0.13130	4	1.0620	0.16510	
5	1.2905	0.16510	6	1.3680	0.22290	7	1.4040	0.22490	8	1.5896	0.22490	
9	1.7280	0.27850	10	1.8720	0.33490	11	2.1060	0.33490	12	2.1420	0.34320	
13	2.6120	0.34320	14	2.6460	0.34750	15	2.8170	0.36140	16	2.9970	0.43040	
17	3.6630	0.43040	18	3.6993	0.42320	19	3.7530	0.42320	20	4.0950	0.43060	
21	4.5000	0.57590	22	5.0040	0.59590	23	5.6250	1.00620	24	6.4260	1.45820	
25	7.5600	2.81550	26	9.2400	2.81550	27	9.4232	2.64730	28	11.4070	2.64730	
29	15.6200	0.96900	30	16.0160	0.89190	31	17.1998	0.89190	32	18.0000	0.91380	
33	22.0000	0.91380	34	22.6380	0.90240	35	24.6620	0.59780	36	32.5018	0.38770	
37	34.8150	0.38770	38	37.1580	0.35450	39	44.0000	0.34150				

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AZ ; DAMPING = 0.02  
FIGURE NO. 440-B DIRECTION 3 AT ELEVATION 899.50

SET NO. = 6

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 440						DEGREE OF FREEDOM = 3		NUMBER OF GRIDS = 38		DAMPING VALUE = 0.020		
1	0.9000	0.12450	2	0.9450	0.13080	3	1.0064	0.13080	4	1.0620	0.16480	
5	1.2907	0.16480	6	1.3680	0.22190	7	1.4040	0.22370	8	1.6045	0.22370	
9	1.6110	0.22570	10	1.7280	0.27580	11	1.8720	0.33160	12	2.1154	0.33160	
13	2.1420	0.33730	14	2.6299	0.33730	15	2.6460	0.33910	16	2.8170	0.35470	
17	2.9970	0.41740	18	3.6630	0.41740	19	3.7229	0.40590	20	3.7530	0.40590	
21	4.0950	0.41230	22	4.5000	0.54150	23	5.0040	0.55070	24	5.6250	0.90430	
25	6.4260	1.28120	26	7.4970	2.34360	27	7.5600	2.39810	28	9.2400	2.39810	
29	9.5322	2.15750	30	11.4070	2.15750	31	15.6200	0.74370	32	16.0160	0.64690	
33	19.2694	0.58880	34	22.6380	0.58880	35	24.6620	0.39280	36	32.5490	0.29880	

37 34.8150 0.29770 38 44.0000 0.28570

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AZ ; DAMPING = 0.02  
FIGURE NO. 441-B DIRECTION 3 AT ELEVATION 860.00

SET NO. = 9  
NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR MODE= 441				DAMPING VALUE = 0.020			
FIGURE NO.	MODE	DEGREE OF FREEDOM	NUMBER OF GRIDS	FIGURE NO.	MODE	DEGREE OF FREEDOM	NUMBER OF GRIDS
1	0.9000	0.12330	2	0.9450	0.12920	3	1.0064
5	1.2923	0.16340	6	1.3680	0.21880	7	1.4040
9	1.6650	0.23510	10	1.7280	0.26920	11	1.8720
13	2.1420	0.32550	14	2.6493	0.32550	15	2.8170
17	3.6630	0.38970	18	3.7532	0.37350	19	4.0950
21	5.0327	0.47070	22	5.6250	0.70230	23	6.4260
25	7.4970	1.57270	26	7.5600	1.58440	27	9.2400
29	11.3740	1.26810	30	11.4070	1.26090	31	14.6630
33	16.0160	0.35810	34	16.9875	0.33710	35	22.0000
37	24.6620	0.29530	38	30.3226	0.19950	39	34.8150
41	40.0000	0.17017					

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AZ ; DAMPING = 0.02  
FIGURE NO. 442-B DIRECTION 3 AT ELEVATION 841.00

SET NO. = 12  
NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR MODE= 442				DAMPING VALUE = 0.020			
FIGURE NO.	MODE	DEGREE OF FREEDOM	NUMBER OF GRIDS	FIGURE NO.	MODE	DEGREE OF FREEDOM	NUMBER OF GRIDS
1	0.9000	0.12310	2	0.9450	0.12890	3	1.0064
5	1.2923	0.16310	6	1.3680	0.21820	7	1.4040
9	1.6650	0.23380	10	1.7280	0.26750	11	1.8720
13	2.1420	0.32280	14	2.6476	0.32280	15	2.8170
17	3.6630	0.36280	18	3.7712	0.36370	19	4.0950
21	5.0511	0.45270	22	5.6250	0.65140	23	6.4260
25	7.4970	1.38470	26	7.5600	1.39030	27	9.2400
29	11.3740	0.96540	30	14.5087	0.35080	31	16.0160
33	22.0000	0.33950	34	22.6380	0.31190	35	24.6620
37	34.8150	0.16520	38	36.9035	0.14042	39	40.0000

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AZ ; DAMPING = 0.02  
FIGURE NO. 443-B DIRECTION 3 AT ELEVATION 825.00

SET NO. = 15  
NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR MODE= 443				DAMPING VALUE = 0.020			
FIGURE NO.	MODE	DEGREE OF FREEDOM	NUMBER OF GRIDS	FIGURE NO.	MODE	DEGREE OF FREEDOM	NUMBER OF GRIDS
1	0.9000	0.12290	2	0.9450	0.12860	3	1.0061
5	1.2924	0.16290	6	1.3680	0.21770	7	1.4040
9	1.6650	0.23250	10	1.7280	0.26590	11	1.8720
13	2.1420	0.32000	14	2.6884	0.32000	15	2.9970
17	3.7602	0.35280	18	4.0950	0.35280	19	4.5000
21	5.6250	0.59740	22	6.4260	0.75910	23	7.2090
25	9.1630	1.19050	26	9.2400	1.18750	27	10.0447
29	11.4070	0.76780	30	14.1628	0.36870	31	16.0160
33	22.0000	0.31440	34	22.6380	0.30370	35	24.6620
37	34.8150	0.13170	38	37.1580	0.12090	39	44.0000

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR 1/2SSE; COMPONENT AZ ; DAMPING = 0.02  
FIGURE NO. 444-B DIRECTION 3 AT ELEVATION 810.50

SET NO. = 18  
NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR MODE= 444				DAMPING VALUE = 0.020			
FIGURE NO.	MODE	DEGREE OF FREEDOM	NUMBER OF GRIDS	FIGURE NO.	MODE	DEGREE OF FREEDOM	NUMBER OF GRIDS
1	0.9000	0.12280	2	0.9450	0.12840	3	1.0060



5	1.2925	0.16280	6	1.3680	0.21730	7	1.4040	0.21800	8	1.6159	0.21800
9	1.6650	0.23130	10	1.7280	0.26430	11	1.8720	0.31740	12	2.7008	0.31740
13	2.9970	0.36820	14	3.6630	0.36820	15	3.7745	0.34230	16	4.0950	0.34230
17	4.5000	0.41440	18	5.1078	0.41440	19	5.6250	0.54690	20	6.4260	0.67630
21	7.2090	0.94150	22	7.4970	1.01470	23	9.1630	1.01470	24	9.2400	1.00460
25	10.1021	0.61530	26	11.4070	0.61530	27	14.2007	0.35540	28	16.0160	0.35540
29	18.3537	0.28940	30	22.0000	0.28940	31	22.6380	0.28360	32	24.6620	0.22980
33	32.4463	0.11680	34	34.8150	0.11680	35	44.0000	0.10920			



TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING; FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX; DAMPING = 0.02 FIGURE NO. 409-B DIRECTION 1 AT ELEVATION 918.00										SET NO. = 1
BROADENED SPECTRUM FOR NODE= 409					DEGREE OF FREEDOM =	NUMBER OF GRIDS = 39		DAMPING VALUE =	NO. OF SPECTRA = 1	
FIGURE NO.	DIRECTION	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	SET NO.	NO. OF SPECTRA	DAMPING VALUE	SET NO.	NO. OF SPECTRA	
1	0.9000	0.25050	2	0.9450	0.26270	3	1.0056	0.26270	0.33060	
5	1.2915	0.33060	6	1.3680	0.44910	7	1.5949	0.44910	0.45970	
9	1.7280	0.56280	10	1.8720	0.67920	11	2.1000	0.67920	0.70540	
13	2.6266	0.70540	14	2.8170	0.75840	15	2.9970	0.87260	0.87260	
17	3.7530	0.88990	18	4.0950	0.89630	19	4.5000	1.24330	1.29360	
21	6.4260	3.32700	22	7.2090	4.98960	23	7.4970	5.37080	5.42260	
25	8.5047	5.42260	26	8.5320	5.49340	27	10.4280	5.49340	5.42260	
29	11.3740	4.17470	30	14.6630	1.97950	31	15.6420	1.59800	4.34340	
33	20.0750	1.42700	34	22.0000	1.32840	35	22.6380	1.23460	1.42700	
37	32.4489	0.67660	38	34.8150	0.67660	39	44.0000	0.62480	0.83700	

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING; FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX; DAMPING = 0.02 FIGURE NO. 410-B DIRECTION 1 AT ELEVATION 899.50										SET NO. = 4
BROADENED SPECTRUM FOR NODE= 410					DEGREE OF FREEDOM =		NUMBER OF GRIDS = 40		NO. OF SPECTRA = 1	
FIGURE NO.	DIRECTION	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	SET NO.	NO. OF SPECTRA	DAMPING VALUE	SET NO.	NO. OF SPECTRA	DAMPING VALUE
1	0.9000	0.24970	2	0.9450	0.26160	3	1.0057	0.26160	4	1.0620
5	1.2919	0.32960	6	1.3680	0.44650	7	1.5973	0.44650	8	1.6110
9	1.7280	0.55790	10	1.8720	0.67290	11	2.1043	0.67290	12	2.1420
13	2.6307	0.69530	14	2.8170	0.74750	15	2.9970	0.85290	16	3.7406
17	3.7530	0.86120	18	4.0950	0.86860	19	4.5000	1.19020	20	5.0040
21	6.4260	3.06180	22	7.2090	4.58910	23	7.4970	4.90870	24	7.5600
25	9.2400	4.95750	26	9.4272	4.84260	27	10.4280	4.84260	28	11.0000
29	11.3740	3.61510	30	14.6630	1.66420	31	15.5448	1.35120	32	16.0160
33	18.2039	1.20830	34	20.0750	1.20830	35	22.0000	1.17990	36	22.6380
37	24.6620	0.76310	38	32.5490	0.59640	39	34.8150	0.59080	40	44.0000
										0.56030

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING; FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX ; DAMPING = 0.02 FIGURE NO. 411-B DIRECTION 1 AT ELEVATION 860.00										SET NO. = 7
BROADENED SPECTRUM FOR NODE= 411					DEGREE OF FREEDOM =	1	NUMBER OF GRIDS = 38	DAMPING VALUE =	NO. OF SPECTRA = 1	
FIGURE NO.	DIRECTION	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	SET NO.	NO. OF SPECTRA	DAMPING VALUE	SET NO.	NO. OF SPECTRA	
1	0.9000	0.24690	2	0.9450	0.25810	3	1.0060	0.25810	0.020	
5	1.2932	0.32670	6	1.3680	0.43870	7	1.6090	0.43870	0.32670	
9	1.7280	0.53960	10	1.8720	0.64880	11	2.1222	0.64880	0.46910	
13	2.6368	0.65840	14	2.8170	0.70010	15	2.9970	0.77680	0.65840	
17	3.7415	0.75000	18	3.7530	0.75000	19	4.0950	0.75630	0.77680	
21	5.0595	0.96820	22	5.6250	1.45290	23	6.4260	1.96590	0.96820	
25	7.4970	2.78090	26	9.1630	2.78090	27	9.2400	2.75990	2.67150	
29	10.4280	2.16710	30	11.0000	1.54050	31	14.1957	0.76800	2.16710	
33	22.0000	0.66920	34	22.6380	0.63460	35	24.6620	0.46320	0.76800	
37	32.5490	0.31620	38	44.0000	0.29100				0.31620	

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING; FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX ; FIGURE NO. 412-B DIRECTION 1 AT ELEVATION 841.00										SET NO. = 10
BROADENED SPECTRUM FOR NODE= 412										NO. OF SPECTRA = 1
FIGURE NO.	DIRECTION	DEGREE OF FREEDOM	NUMBER OF GRIDS	DAMPING VALUE	SET NO.	NO. OF SPECTRA	DAMPING VALUE	SET NO.	NO. OF SPECTRA	

BROADENED SPECTRUM FOR NODE= 412						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 37		DAMPING VALUE = 0.020	
1	0.9000	0.24620	2	0.9450	0.25720	3	1.0057	0.25720	4	1.0620	0.32590
5	1.2931	0.32590	6	1.3680	0.43690	7	1.6112	0.43690	8	1.6650	0.46560
9	1.7280	0.53440	10	1.8720	0.64220	11	2.1280	0.64220	12	2.1420	0.64860
13	2.7119	0.64860	14	2.9970	0.75550	15	3.6630	0.75550	16	3.7568	0.72400
17	4.0950	0.72400	18	4.5000	0.90610	19	5.0995	0.90610	20	5.6250	1.28360
21	7.2090	2.14390	22	7.4570	2.21100	23	9.1630	2.21100	24	9.2400	2.16770
25	10.0744	1.65910	26	10.4280	1.65910	27	11.0000	1.15770	28	11.3740	1.05750
29	13.9846	0.78310	30	16.0160	0.78310	31	17.3286	0.75040	32	20.0750	0.75040
33	22.6380	0.62160	34	24.6620	0.42200	35	31.5696	0.29350	36	32.5490	0.29350
37	44.0000	0.26500									

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX ; DAMPING = 0.02  
FIGURE NO. 413-B DIRECTION 1 AT ELEVATION 825.00

SET NO. = 13

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 413						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 36		DAMPING VALUE = 0.020	
1	0.9000	0.24570	2	0.9450	0.25660	3	1.0055	0.25660	4	1.0620	0.32540
5	1.2929	0.32540	6	1.3680	0.43570	7	1.6170	0.43570	8	1.7280	0.53060
9	1.8720	0.63740	10	2.1327	0.63740	11	2.1420	0.64150	12	2.7168	0.64150
13	2.8170	0.67960	14	2.5970	0.73960	15	3.6630	0.73960	16	3.7509	0.69990
17	4.0950	0.69990	18	4.5000	0.86070	19	5.1325	0.86070	20	5.6250	1.16290
21	7.2090	1.83480	22	7.4970	1.84680	23	9.1630	1.84680	24	10.1182	1.36850
25	10.4280	1.36850	26	11.0000	0.92330	27	11.4070	0.80510	28	13.0611	0.80510
29	13.1040	0.81550	30	16.0160	0.81550	31	18.6317	0.67820	32	20.0750	0.67820
33	22.6380	0.55580	34	24.6620	0.36530	35	32.5490	0.26390	36	44.0000	0.24570

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX ; DAMPING = 0.02  
FIGURE NO. 414-B DIRECTION 1 AT ELEVATION 810.50

SET NO. = 16

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 414						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 39		DAMPING VALUE = 0.020	
1	0.9000	0.24530	2	0.9450	0.25600	3	1.0053	0.25600	4	1.0620	0.32500
5	1.2927	0.32500	6	1.3680	0.43450	7	1.6189	0.43450	8	1.7280	0.52710
9	1.8720	0.63300	10	2.1373	0.63300	11	2.1420	0.63500	12	2.7211	0.63500
13	2.8170	0.67140	14	2.5970	0.72510	15	3.6630	0.72510	16	3.7675	0.67770
17	4.0950	0.67770	18	4.5000	0.81980	19	5.1638	0.81980	20	5.6250	1.05740
21	7.2090	1.57380	22	8.8110	1.57380	23	9.1630	1.54320	24	10.1759	1.13160
25	10.4280	1.13160	26	11.0000	0.75930	27	11.6741	0.75930	28	11.9970	0.76620
29	12.8620	0.76620	30	13.1040	0.81430	31	16.0160	0.81430	32	19.1935	0.60280
33	20.0750	0.60280	34	22.0000	0.52420	35	22.6380	0.48910	36	24.6620	0.34830
37	32.5490	0.24510	38	34.8150	0.24400	39	44.0000	0.23090			

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY ; DAMPING = 0.02  
FIGURE NO. 409-B DIRECTION 2 AT ELEVATION 918.00

SET NO. = 2

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 409						DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 42		DAMPING VALUE = 0.020	
1	0.9000	0.17830	2	0.9450	0.17930	3	0.9990	0.17930	4	1.0620	0.22900
5	1.1250	0.23690	6	1.2923	0.23690	7	1.3230	0.28310	8	1.3680	0.33110
9	1.6674	0.33110	10	1.8900	0.41630	11	2.0430	0.43200	12	2.4004	0.43200
13	2.5020	0.47780	14	2.6460	0.53870	15	2.8170	0.56780	16	2.9970	0.66310
17	3.4967	0.66310	18	3.7530	0.90420	19	4.3788	0.90420	20	4.5000	0.95340
21	5.1587	0.95340	22	5.6250	1.15610	23	6.4260	1.72630	24	7.5600	2.31360
25	8.5320	2.64400	26	10.4280	2.64400	27	10.7920	2.44230	28	11.3740	2.44230
29	11.4070	2.43740	30	12.6653	2.43740	31	12.7800	2.52960	32	12.7980	2.53290
33	15.6420	2.53290	34	16.0160	2.17710	35	19.2940	1.34390	36	20.1080	1.12630
37	22.0000	1.01910	38	22.6380	0.85100	39	24.6620	0.85000	40	31.4173	0.56280

41 37.1580 0.56280 42 44.0000 0.56280

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY; DIRECTION 2 DAMPING = 0.02 AT ELEVATION 899.50 SET NO. = 5  
FIGURE NO. 410-B NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 410	DEGREE OF FREEDOM = 2	NUMBER OF GRIDS = 41	DAMPING VALUE = 0.020
1 0.9000 0.17830 2 0.9450 0.17930 3 0.9991 0.17930 4 1.0620 0.22860			
5 1.1250 0.23670 6 1.2924 0.23670 7 1.3230 0.28330 8 1.3680 0.33120			
9 1.6663 0.33120 10 1.8000 0.41770 11 2.0430 0.43230 12 2.3979 0.43230			
13 2.5020 0.48050 14 2.6460 0.54120 15 2.8170 0.56870 16 2.9970 0.66740			
17 3.4964 0.66740 18 3.7530 0.91140 19 4.3598 0.91140 20 4.5000 0.97060			
21 5.1180 0.97060 22 5.6250 1.22080 23 7.5600 2.67320 24 8.4854 2.67320			
25 8.5320 2.71150 26 10.4280 2.71150 27 10.7052 2.56320 28 11.4070 2.56320			
29 11.8325 2.46530 30 12.7800 2.46530 31 12.7980 2.47250 32 15.6420 2.47250			
33 16.0160 2.19730 34 19.2940 1.38170 35 20.1080 1.15700 36 22.0000 1.04310			
37 22.6380 0.91100 38 24.6620 0.86990 39 31.0053 0.53960 40 37.1580 0.53960			
41 44.0000 0.53960			

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY; DIRECTION 2 DAMPING = 0.02 AT ELEVATION 860.00 SET NO. = 8  
FIGURE NO. 411-B NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 411	DEGREE OF FREEDOM = 2	NUMBER OF GRIDS = 39	DAMPING VALUE = 0.020
1 0.9000 0.17830 2 0.9450 0.17910 3 0.9990 0.17920 4 1.0620 0.22870			
5 1.1250 0.23690 6 1.2929 0.23690 7 1.3230 0.28260 8 1.3680 0.33060			
9 1.6677 0.33060 10 1.8000 0.41540 11 2.0430 0.43070 12 2.4027 0.43070			
13 2.5020 0.47580 14 2.6460 0.53500 15 2.8170 0.56420 16 2.9970 0.65870			
17 3.4975 0.65870 18 3.7530 0.89140 19 4.3774 0.89340 20 4.5000 0.94230			
21 5.1428 0.94230 22 5.6250 1.16370 23 7.5600 2.48250 24 9.2400 2.48250			
25 10.4280 2.48060 26 10.8095 2.30700 27 11.4070 2.30700 28 12.2063 2.11520			
29 12.7800 2.11520 30 12.7980 2.11590 31 15.6420 2.11590 32 16.0160 1.85480			
33 19.2940 1.09120 34 20.1080 0.91190 35 22.0000 0.79380 36 22.6380 0.70880			
37 24.6620 0.64940 38 32.5490 0.39490 39 44.0000 0.36180			

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY; DIRECTION 2 DAMPING = 0.02 AT ELEVATION 841.00 SET NO. = 11  
FIGURE NO. 412-B NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 412	DEGREE OF FREEDOM = 2	NUMBER OF GRIDS = 41	DAMPING VALUE = 0.020
1 0.9000 0.17810 2 0.9450 0.17900 3 0.9990 0.17900 4 1.0620 0.22860			
5 1.1250 0.23670 6 1.2928 0.23670 7 1.3230 0.28230 8 1.3680 0.33030			
9 1.6680 0.33030 10 1.8000 0.41460 11 2.0430 0.43010 12 2.4033 0.43010			
13 2.5020 0.47450 14 2.6460 0.53350 15 2.8170 0.56290 16 2.9970 0.65680			
17 3.4979 0.65680 18 3.7530 0.89070 19 4.3868 0.89070 20 4.5000 0.93500			
21 5.1617 0.93500 22 5.6250 1.13060 23 6.4260 1.67480 24 7.5600 2.29840			
25 9.2400 2.29840 26 9.4792 2.26480 27 10.4280 2.26480 28 11.124 2.18180			
29 11.4070 2.18180 30 12.0437 2.02360 31 12.7800 2.02360 32 12.7980 2.02520			
33 15.6420 2.02520 34 16.0160 1.72550 35 19.2940 1.02000 36 20.1080 0.83540			
37 22.0000 0.72880 38 22.6380 0.61800 39 24.6620 0.57500 40 32.5490 0.36350			
41 44.0000 0.34230			

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY; DIRECTION 2 DAMPING = 0.02 AT ELEVATION 825.00 SET NO. = 14  
FIGURE NO. 413-B NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 413 DEGREE OF FREEDOM = 2 NUMBER OF GRIDS = 40 DAMPING VALUE = 0.020

1	0.9000	2	0.9450	0.17890	3	0.9990	0.17890	4	1.0620	0.22850
5	1.1250	6	1.2929	0.23670	7	1.3230	0.28210	8	1.3680	0.33010
9	1.6683	10	1.8000	0.41410	11	2.0430	0.42970	12	2.4041	0.42970
13	2.5020	14	2.6460	0.53240	15	2.8170	0.56180	16	2.9970	0.65540
17	3.4983	18	3.7530	0.68790	19	4.3931	0.68790	20	4.5000	0.92910
21	5.1739	22	5.6250	1.11080	23	6.4260	1.63610	24	7.5600	2.20640
25	9.2400	26	9.3584	2.19180	27	10.4280	2.19180	28	11.4070	2.13620
29	12.0508	30	12.7800	1.97500	31	12.7980	1.97640	32	15.6420	1.97640
33	16.0160	34	19.2940	0.98570	35	20.1080	0.60110	36	22.0000	0.69940
37	22.6380	38	24.6620	0.54490	39	32.5490	0.35520	40	44.0000	0.33570

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING; FLOOR RESPONSE SPECTRA FOR SSE: COMPONENT AY ; FIGURE NO. 414-B DIRECTION 2 DAMPING = 0.02 AT ELEVATION 810.50									
BROADBAND SPECTRUM FOR MODE= 414			DEGREE OF FREEDOM =		NUMBER OF GRIDS = 39		SET NO. = 17		
							DAMPING VALUE =	NO. OF SPECTRA =	
1	0.9000	0.17790	2	0.9450	0.17870	3	4	1.0620	0.22850
5	1.1250	0.23650	6	1.2928	0.23650	7	8	1.3680	0.32940
9	1.6693	0.32940	10	1.8000	0.41210	11	12	2.4074	0.42830
13	2.5020	0.46970	14	2.6460	0.52800	15	16	2.9970	0.64920
17	3.4990	0.64920	18	3.7530	0.87630	19	20	4.5009	0.90860
21	5.2124	0.90860	22	5.6250	1.05660	23	24	7.5600	2.01880
25	8.3794	2.01880	26	8.5320	2.11620	27	28	11.4070	2.03330
29	12.0613	1.87680	30	15.6200	1.87680	31	32	16.0160	1.57120
33	19.2940	0.89590	34	20.1080	0.72420	35	36	22.6380	0.54410
37	32.5490	0.33740	38	37.1580	0.33040	39			

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;										
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ :										
409-B										
FIGURE NO.                      DIRECTION                      3										
DAMPING = 0.02										
AT ELEVATION                      918.00										
SET NO. =                      3										
NO. OF SPECTRA =                      1										
BROADENED SPECTRUM FOR MODE= 409										
DEGREE OF FREEDOM =                      3										
NUMBER OF GRIDS =                      37										
DAMPING VALUE =                      0.020										
1	0.9000	0.24960	2	0.9450	0.26250	3	1.0070	4	1.0620	0.32990
5	1.2910	0.32990	6	1.3680	0.44600	7	1.4040	8	1.5896	0.44940
9	1.7280	0.55690	10	1.8720	0.66920	11	2.1061	12	2.1420	0.68590
13	2.6249	0.68590	14	2.6460	0.69100	15	2.8170	16	2.9970	0.85580
17	3.6630	0.85580	18	3.6864	0.84670	19	3.7530	20	4.0950	0.85860
21	4.5000	1.14440	22	5.0040	1.17350	23	5.6250	24	6.4260	2.83710
25	7.5600	5.14830	26	9.2400	5.14830	27	9.7778	28	11.4070	4.29700
29	14.6630	2.39090	30	15.6200	1.79280	31	19.2940	32	19.3276	1.57140
33	22.6380	1.57140	34	24.6620	1.00430	35	32.3748	36	34.8150	0.69960
37	44.0000	0.63360								

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING; FLOOR RESPONSE SPECTRA FOR SSE: COMPONENT AZ : FIGURE NO. 410-B DIRECTION 3 AT ELEVATION 899.50										SET NO. = 6
BROADENED SPECTRUM FOR MODE= 410			DEGREE OF FREEDOM = 3	NUMBER OF GRIDS = 36	DAMPING VALUE = 0.020		NO. OF SPECTRA = 1			
1	0.9000	0.24880	2	0.9450	0.26150	4	1.0620	0.32930		
5	1.2910	0.32930	6	1.3680	0.44390	7	1.6049	0.44700		
9	1.6110	0.45070	10	1.7280	0.55150	12	2.1146	0.66240		
13	2.1420	0.67430	14	2.6441	0.67430	16	2.8170	0.70750		
17	2.9970	0.83060	18	3.6630	0.83060	20	3.7530	0.81190		
21	4.0950	0.82220	22	4.5000	1.07660	24	5.6250	1.78530		
25	6.4260	2.49560	26	7.4970	4.29280	28	9.2400	4.38660		
29	9.8558	3.50360	30	11.4070	3.50360	32	19.6608	1.02070		
33	22.6380	1.02070	34	24.6620	0.65170	36	44.0000	0.53680		



SET NO. = 9

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ ;  
FIGURE NO. 411-B DIRECTION 3 DAMPING = 0.02 AT ELEVATION 850.00

BROADENED SPECTRUM FOR MODE= 411	DEGREE OF FREEDOM =	3	NUMBER OF GRIDS = 41	DAMPING VALUE =	0.020
1 0.9000 0.24650 2	0.9450 0.25840 3	1.0064 0.25840	4 1.0620	0.32660	0.32660
5 1.2924 0.32660 6	1.3680 0.43770 7	1.4040 0.44010	8 1.6120	0.44010	0.44010
9 1.6650 0.47020 10	1.7280 0.53830 11	1.8720 0.64610	12 2.1259	0.64610	0.64610
14 2.6448 0.65140 15	2.8170 0.68500 16	2.9970 0.77670	17 3.6630	0.77670	0.77670
18 3.7507 0.74560 19	4.0950 0.93710 20	4.5000 0.93710	21 5.0396	0.93710	0.93710
22 5.6250 1.82870 23	6.4260 2.0900 24	7.2090 2.63520	25 7.4970	2.63520	2.63520
26 7.5600 2.90370 27	9.9773 2.90370 28	9.9773 2.08570	29 11.3740	2.08570	2.08570
30 11.4070 2.08210 31	14.6630 0.68810 32	14.9749 0.68810	33 16.0160	0.68810	0.68810
34 17.8481 0.59980 35	22.0000 0.59980 36	22.6380 0.58120	37 24.6620	0.58120	0.58120
38 30.5336 0.36510 39	34.8150 0.36510 40	40.0000 0.32331		0.32331	0.32331

SET NO. = 12

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ ;  
FIGURE NO. 412-B DIRECTION 3 DAMPING = 0.02 AT ELEVATION 841.00

BROADENED SPECTRUM FOR MODE= 412				DEGREE OF FREEDOM =		NUMBER OF GRIDS = 39		DAMPING VALUE =		0.020	
1	0.9000	0.24610	2	0.9450	0.25770	3	1.0063	0.25770	4	1.0620	0.32610
5	1.2925	0.32610	6	1.3680	0.43630	7	1.4040	0.43850	8	1.6135	0.43850
9	1.6650	0.46750	10	1.7280	0.53500	11	1.8720	0.64210	12	2.1325	0.64210
13	2.1420	0.64590	14	2.6437	0.64590	15	2.8170	0.67950	16	2.9770	0.76300
17	3.6630	0.76300	18	3.7688	0.72610	19	4.0950	0.72610	20	4.5000	0.90180
21	5.0581	0.90180	22	5.6250	1.28980	23	6.4260	1.66030	24	7.2090	2.34100
25	7.4970	2.54360	26	7.5600	2.54630	27	9.2400	2.54630	28	10.1309	1.64670
29	11.3740	1.64670	30	14.5201	0.67120	31	16.0160	0.67120	32	17.2335	0.61080
33	22.0000	0.61080	34	22.6380	0.55160	35	24.6620	0.48730	36	31.2686	0.30630
37	34.8150	0.30630	38	33.8951	0.26781	39	40.0000	0.26781			

SET NO. = 15

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ ;  
FIGURE NO. 413-B DIRECTION 3 DAMPING = 0.02 AT ELEVATION 825.00

BROADENED SPECTRUM FOR MODE= 413				DEGREE OF FREEDOM =		NUMBER OF GRIDS = 36		DAMPING VALUE =		0.020	
1	0.9000	0.24580	2	0.9450	0.25710	3	1.0060	0.25710	4	1.0620	0.32570
5	1.2924	0.32570	6	1.3680	0.43540	7	1.4040	0.42710	8	1.6147	0.43710
9	1.6650	0.46490	10	1.7280	0.53170	11	1.8720	0.63810	12	2.1364	0.63810
13	2.1420	0.64030	14	2.6930	0.64030	15	2.9970	0.74840	16	3.6630	0.74840
17	3.7587	0.70460	18	4.0950	0.70460	19	4.5000	0.86310	20	5.0832	0.86310
21	5.6250	1.18380	22	6.4260	1.18380	23	7.2090	2.03650	24	7.4970	2.18930
25	9.1630	2.18930	26	9.2400	2.17570	27	10.1673	1.34660	28	10.4280	1.34660
29	11.3740	1.33250	30	14.1070	0.70470	31	16.0160	0.70470	32	18.3255	0.56240
33	22.0000	0.56240	34	32.0449	0.24670	35	34.8150	0.24670	36	44.0000	0.22460

SET NO. = 18

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ ;  
FIGURE NO. 414-B DIRECTION 3 DAMPING = 0.02 AT ELEVATION 810.50

BROADENED SPECTRUM FOR MODE= 414		DEGREE OF FREEDOM =		NUMBER OF GRIDS = 38		DAMPING VALUE =																																																																																																											
1	0.9000	0.24550	2	0.9450	0.25670	3	1.0058	0.25670	4	1.0620	0.32540	5	1.2925	0.32540	6	1.3680	0.43600	7	1.4040	0.43600	8	1.6160	0.43600	9	1.6650	0.46250	10	1.7280	0.52860	11	1.8720	0.63440	12	2.1404	0.63440	13	2.1420	0.63500	14	2.7043	0.63500	15	2.9970	0.73440	16	3.6630	0.73440	17	4.0950	0.73440	18	4.5000	0.73440	19	4.5000	0.73440	20	4.5000	0.73440	21	4.5000	0.73440	22	4.5000	0.73440	23	4.5000	0.73440	24	4.5000	0.73440	25	4.5000	0.73440	26	4.5000	0.73440	27	4.5000	0.73440	28	4.5000	0.73440	29	4.5000	0.73440	30	4.5000	0.73440	31	4.5000	0.73440	32	4.5000	0.73440	33	4.5000	0.73440	34	4.5000	0.73440	35	4.5000	0.73440	36	4.5000	0.73440	37	4.5000	0.73440	38	4.5000	0.73440



17	3.7734	0.68370	18	4.0950	0.68370	19	4.5000	0.82610	20	5.1147	0.82610
21	5.6250	1.08480	22	6.4260	1.32530	23	7.2090	1.75880	24	7.4970	1.86830
25	9.1630	1.86830	26	9.2400	1.84060	27	10.1517	1.12200	28	10.4280	1.12200
29	11.4070	1.08130	30	14.1658	0.68320	31	16.0160	0.68320	32	18.6979	0.51690
33	20.0750	0.51690	34	22.0000	0.50190	35	22.6380	0.49290	36	32.3876	0.22600
37	34.8150	0.22600	38	44.0000	0.20740						

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX ; DAMPING = 0.03  
FIGURE NO. 415-B DIRECTION 1 AT ELEVATION 918.00

SET NO. = 1

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 415						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 36		DAMPING VALUE = 0.030	
1	0.9000	0.23460	2	0.9450	0.24730	3	0.9990	0.24750	4	1.0620	0.29280
5	1.2870	0.31150	6	1.3680	0.37980	7	1.4520	0.37980	8	1.5030	0.39980
9	1.5765	0.39980	10	1.8000	0.52400	11	1.8720	0.55750	12	2.1420	0.56430
13	2.2500	0.58980	14	2.5879	0.58980	15	2.9970	0.71370	16	3.6410	0.71370
17	3.7530	0.76190	18	4.5000	0.97720	19	5.0040	1.20690	20	6.4260	2.79420
21	7.2090	4.23500	22	7.4970	4.51610	23	9.1630	4.51610	24	9.6214	4.31510
25	10.4280	4.31510	26	11.0000	3.58440	27	11.3740	3.38900	28	15.5828	1.36250
29	16.0160	1.36250	30	16.7381	1.31660	31	20.0750	1.31660	32	22.0000	1.27530
33	24.6620	0.83590	34	32.5490	0.67310	35	34.8150	0.66880	36	44.0000	0.62540

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX ; DAMPING = 0.03  
FIGURE NO. 416-B DIRECTION 1 AT ELEVATION 899.50

SET NO. = 4

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 416						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 37		DAMPING VALUE = 0.030	
1	0.9000	0.23370	2	0.9450	0.24610	3	0.9990	0.24620	4	1.0520	0.29180
5	1.2870	0.31000	6	1.3680	0.37620	7	1.4506	0.37620	8	1.5030	0.39590
9	1.5758	0.39590	10	1.8000	0.51770	11	1.8720	0.55230	12	2.1420	0.55590
13	2.2500	0.58280	14	2.5950	0.58280	15	2.9970	0.69730	16	3.6537	0.69730
17	3.7530	0.73700	18	4.5000	0.93490	19	5.0040	1.14100	20	6.4260	2.56940
21	7.2090	3.90270	22	7.4970	4.13310	23	9.1630	4.13310	24	9.2400	4.09770
25	9.7768	3.81130	26	10.4280	3.81130	27	11.0000	3.12730	28	11.3740	2.94010
29	15.4627	1.17850	30	16.0160	1.17850	31	17.0245	1.11550	32	22.0000	1.11550
33	22.6380	1.03030	34	24.6620	0.74630	35	32.5490	0.59640	36	34.8150	0.58910
37	44.0000	0.56040									

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX ; DAMPING = 0.03  
FIGURE NO. 417-B DIRECTION 1 AT ELEVATION 860.00

SET NO. = 7

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 417						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 35		DAMPING VALUE = 0.030	
1	0.9000	0.23090	2	0.9450	0.24270	3	0.9997	0.24270	4	1.0620	0.28890
5	1.2870	0.30450	6	1.3680	0.36240	7	1.4490	0.36380	8	1.5030	0.38120
9	1.5703	0.38120	10	1.8720	0.53220	11	2.1727	0.53220	12	2.2500	0.55530
13	2.6325	0.55530	14	2.8170	0.59860	15	2.9970	0.63340	16	3.7198	0.63340
17	3.7530	0.64300	18	4.0950	0.65870	19	4.5000	0.75690	20	5.0040	0.85560
21	5.6250	1.23500	22	6.4260	1.64360	23	7.2090	2.30150	24	7.4970	2.35260
25	9.1630	2.35260	26	10.0831	1.73100	27	10.4280	1.73100	28	11.0000	1.28990
29	14.1527	0.68940	30	20.0750	0.68940	31	20.1080	0.68820	32	22.0000	0.61640
33	24.6620	0.40380	34	32.5490	0.30740	35	44.0000	0.29140			

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX ; DAMPING = 0.03  
FIGURE NO. 418-B DIRECTION 1 AT ELEVATION 841.00

SET NO. = 10

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 418						DEGREE OF FREEDOM = 1		NUMBER OF GRIDS = 39		DAMPING VALUE = 0.030	
1	0.9000	0.23020	2	0.9450	0.24190	3	0.9993	0.24190	4	1.0620	0.28820

5	1.2870	0.30320	6	1.3680	0.35880	7	1.4490	0.36110	8	1.5030	0.37730
9	1.5688	0.37730	10	1.8720	0.52660	11	2.1808	0.52660	12	2.2500	0.54710
13	2.6356	0.54710	14	2.8170	0.58730	15	2.9970	0.61550	16	3.7439	0.61550
17	3.7530	0.61790	18	4.0950	0.63100	19	4.5000	0.70720	20	5.0040	0.77700
21	5.6250	1.08600	22	6.4260	1.39630	23	7.2090	1.88670	24	8.8110	1.88670
25	9.1630	1.87480	26	10.1148	1.32820	27	10.4280	1.32820	28	11.0000	0.98390
29	11.3740	0.88830	30	14.9019	0.64030	31	16.0508	0.64030	32	16.4250	0.67230
33	20.0750	0.67230	34	22.0000	0.59370	35	22.6380	0.54770	36	24.6620	0.36740
37	34.6807	0.27030	38	37.1580	0.27030	39	44.0000	0.26300			

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX; DAMPING = 0.03  
FIGURE NO. 419-B DIRECTION 1 AT ELEVATION 825.00

BROADENED SPECTRUM FOR NODE= 419	DEGREE OF FREEDOM =	NUMBER OF GRIDS = 37	DAMPING VALUE =	SET NO. =	NO. OF SPECTRA =
1 0.9000	0.9450	0.9990	0.24140	4	0.030
5 1.2870	1.3680	1.5030	0.37450	8	0.28780
9 1.8720	2.1871	2.2500	0.54100	12	0.37450
13 2.8170	2.9970	3.6630	0.60220	16	0.54100
17 3.7530	5.0040	5.6250	0.98040	20	0.59870
21 7.2090	8.8110	9.1630	1.56950	24	1.22610
25 10.4280	11.0000	11.4070	1.56950	28	1.07850
29 16.0160	17.5125	20.0750	0.68930	32	1.07850
33 22.6380	24.6620	32.5490	0.60810	36	0.65190
37 44.0000			0.25860		0.53460

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AX; DAMPING = 0.03  
FIGURE NO. 420-B DIRECTION 1 AT ELEVATION 810.50

BROADENED SPECTRUM FOR NODE= 420	DEGREE OF FREEDOM =	NUMBER OF GRIDS = 38	DAMPING VALUE =	SET NO. =	NO. OF SPECTRA =
1 0.9000	0.9450	0.9990	0.24110	4	0.030
5 1.2870	1.3680	1.5030	0.37200	8	0.28740
9 1.8720	2.1933	2.2500	0.53520	12	0.37200
13 2.8170	2.9970	3.6630	0.59020	16	0.53520
17 3.7530	5.0040	5.6250	0.67270	20	0.58100
21 6.4260	7.2090	8.8110	1.38060	24	0.88840
25 10.1860	10.4280	11.0000	0.67920	28	1.31390
29 12.9224	13.1040	16.0160	0.66150	32	0.64350
33 20.0750	22.0000	24.6620	0.47700	36	0.54190
37 34.8150	44.0000		0.23100		0.24430

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY; DAMPING = 0.03  
FIGURE NO. 415-B DIRECTION 2 AT ELEVATION 918.00

BROADENED SPECTRUM FOR NODE= 415	DEGREE OF FREEDOM =	NUMBER OF GRIDS = 43	DAMPING VALUE =	SET NO. =	NO. OF SPECTRA =
1 0.9000	0.9990	1.0620	0.19970	4	0.030
5 1.2870	1.3230	1.3680	0.27670	8	0.20610
9 1.6650	2.2024	1.8000	0.35120	12	0.27670
13 2.0430	2.8170	2.2500	0.37800	16	0.36460
17 2.6460	4.7320	2.9970	0.54600	20	0.40100
21 3.7530	7.2090	4.5000	0.77720	24	0.57650
25 5.6250	10.4280	7.2090	1.81350	28	0.80340
29 8.5320	12.7980	11.3740	1.93330	32	1.92660
33 12.7800	22.0000	15.6420	1.93090	36	1.92430
37 20.1080	37.1580	22.6380	0.80500	40	1.24240
41 31.6583		44.0000	0.51140		0.76980

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY ; DAMPING = 0.03  
FIGURE NO. 416-B DIRECTION 2 AT ELEVATION 899.50

SET NO. = 5

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 416			DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 43		DAMPING VALUE = 0.030	
1	0.9000	0.16630	2	0.9990	0.17300	3	1.0620	0.19970
5	1.2870	0.21230	6	1.3230	0.25080	7	1.3680	0.27690
9	1.6650	0.29290	10	1.7280	0.30320	11	1.8000	0.35250
13	2.0430	0.36890	14	2.2012	0.36890	15	2.2500	0.37840
17	2.6460	0.47560	18	2.8170	0.47910	19	2.9970	0.55090
21	3.7530	0.73920	22	4.1751	0.73920	23	4.5000	0.79220
25	5.6250	1.02960	26	7.2090	2.05260	27	7.4970	2.20060
29	9.2400	2.21310	30	9.3973	2.19020	31	10.4280	2.19020
33	12.1075	1.89770	34	15.6420	1.89770	35	16.0160	1.84210
37	20.1080	1.06050	38	22.0000	0.95470	39	22.6380	0.85560
41	30.8130	0.50380	42	37.1580	0.50380	43	44.0000	0.50380

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY ; DAMPING = 0.03  
FIGURE NO. 417-B DIRECTION 2 AT ELEVATION 860.00

SET NO. = 8

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 417			DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 40		DAMPING VALUE = 0.030	
1	0.9000	0.16630	2	0.9990	0.17300	3	1.0620	0.19980
5	1.2870	0.21180	6	1.3230	0.25010	7	1.3680	0.27640
9	1.6650	0.29170	10	1.7280	0.30260	11	1.8000	0.35030
13	2.0430	0.36750	14	2.2069	0.36750	15	2.2500	0.37600
17	2.6460	0.46970	18	2.8170	0.47550	19	2.9970	0.54250
21	3.7530	0.72450	22	4.2017	0.72450	23	4.5000	0.76610
25	5.6250	0.97910	26	7.2090	1.90260	27	7.4970	2.03870
29	9.2400	2.04470	30	10.4280	2.01160	31	12.8273	1.63460
33	16.0160	1.56720	34	19.2940	1.01330	35	20.1080	0.84630
37	22.6380	0.66510	38	24.6620	0.60140	39	32.5490	0.38790
						40	44.0000	0.36230

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY ; DAMPING = 0.03  
FIGURE NO. 418-B DIRECTION 2 AT ELEVATION 841.00

SET NO. = 11

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 418			DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 43		DAMPING VALUE = 0.030	
1	0.9000	0.16620	2	0.9990	0.17280	3	1.0620	0.19960
5	1.2870	0.21170	6	1.3230	0.24990	7	1.3680	0.27600
9	1.6650	0.29120	10	1.7280	0.30220	11	1.8000	0.34970
13	2.0430	0.36700	14	2.2074	0.36700	15	2.2500	0.37540
17	2.6460	0.46850	18	2.8170	0.47440	19	2.9970	0.54060
21	3.7530	0.72210	22	4.2188	0.72210	23	4.5000	0.75960
25	5.6250	0.95160	26	6.4260	1.41050	27	7.2090	1.78150
29	7.5600	1.89870	30	9.2400	1.89870	31	10.4280	1.83040
33	12.5218	1.54530	34	12.7800	1.54530	35	12.7980	1.55090
37	19.2940	0.95270	38	20.1080	0.77250	39	22.0000	0.67950
41	24.6620	0.54690	42	32.5490	0.36360	43	44.0000	0.34260

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY ; DAMPING = 0.03  
FIGURE NO. 419-B DIRECTION 2 AT ELEVATION 825.00

SET NO. = 14

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 419			DEGREE OF FREEDOM = 2		NUMBER OF GRIDS = 44		DAMPING VALUE = 0.030	
1	0.9000	0.16620	2	0.9990	0.17280	3	1.0620	0.19950
						4	1.1250	0.20570



FIGURE NO.	5	9	13	17	21	25	29	33	37	41
BROADENED SPECTRUM FOR MODE= 420-B	0.21160	0.29100	0.36660	0.46750	0.71980	0.93440	1.82930	1.50620	0.92140	0.52240
DEGREE OF FREEDOM = 2	0.9990	0.21160	0.28990	0.36540	0.46350	0.71030	0.88770	1.70800	1.42880	0.59090
AT ELEVATION 810.50	1.2870	1.6650	2.0430	2.6460	3.7530	5.6250	7.5600	12.5359	19.2940	24.6620
NUMBER OF GRIDS = 41	1.3230	1.7280	2.2077	2.8170	4.2306	6.4260	9.2400	12.7800	20.1080	32.5490
DAMPING = 0.03	0.24970	0.30200	0.36660	0.47350	0.71980	1.37770	1.82930	1.50620	0.74230	0.35520
NO. OF SPECTRA = 1	7	11	15	19	23	27	31	35	39	43
DAMPING VALUE = 0.030	1.3680	1.8000	2.2500	2.9970	4.5000	7.2090	10.4280	12.7980	22.0000	37.1580
SET NO. = 17	8	12	16	20	24	28	32	36	40	44
DAMPING VALUE = 0.030	0.27590	0.34930	0.37490	0.53910	0.75430	1.17150	1.76980	1.51160	0.65260	0.34670
SET NO. = 17	1.6354	1.9530	2.5020	3.4650	5.0040	7.4970	11.4070	15.6420	22.6380	44.0000
DAMPING VALUE = 0.030	0.27590	0.36290	0.39740	0.56910	0.78000	1.82450	1.68100	1.51160	0.57320	0.33570

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AY; DIRECTION 2; DAMPING = 0.03  
AT ELEVATION 810.50

FIGURE NO.	1	5	9	13	17	21	25	29	33	37	41
BROADENED SPECTRUM FOR MODE= 415-B	0.9000	0.16600	0.21160	0.28990	0.36540	0.46350	0.71030	0.88770	1.70800	1.42880	0.59090
DEGREE OF FREEDOM = 3	0.9990	0.17270	0.24900	0.30130	0.36540	0.47110	0.71030	1.28500	1.60650	1.42880	0.52720
AT ELEVATION 918.00	1.0620	1.3680	1.6000	2.2500	2.9970	4.5000	7.5600	12.6354	19.2940	32.0650	40.33680
DAMPING = 0.03	0.19920	0.27530	0.34750	0.37310	0.53280	0.73590	1.67320	1.42500	0.83960	0.33680	0.33130
NO. OF SPECTRA = 1	4	8	12	16	20	24	28	32	36	40	44
DAMPING VALUE = 0.030	1.1250	1.6364	1.9530	2.5020	3.4650	5.0040	8.5320	12.7800	20.1080	37.1580	40.33130
SET NO. = 3	4	8	12	16	20	24	28	32	36	40	44
DAMPING VALUE = 0.030	0.29270	0.39410	0.54910	0.69990	1.06040	1.6540	3.35140	1.42580	0.68880	0.63420	0.63420

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ; DIRECTION 3; DAMPING = 0.03  
AT ELEVATION 918.00

FIGURE NO.	1	5	9	13	17	21	25	29	33	37	41
BROADENED SPECTRUM FOR MODE= 416-B	0.23370	0.30560	0.39410	0.58040	0.72480	0.89710	3.72620	3.35140	1.44790	0.69140	0.53650
DEGREE OF FREEDOM = 3	0.9450	0.37310	0.51470	0.58040	0.89710	3.72620	3.35140	1.44790	0.69140	0.53650	0.53650
AT ELEVATION 899.50	1.0012	1.4502	1.8720	2.9970	5.0040	7.4970	11.3740	17.1169	34.8150	44.0000	44.0000
DAMPING = 0.03	0.24720	0.37310	0.54910	0.69990	1.06040	1.6540	3.35140	1.42580	0.68880	0.63420	0.63420
NO. OF SPECTRA = 1	3	7	11	15	19	23	27	31	35	39	43
DAMPING VALUE = 0.030	1.0620	1.5030	2.1501	3.6899	5.6250	7.5600	14.6630	22.6380	44.0000	44.0000	44.0000
SET NO. = 6	4	8	12	16	20	24	28	32	36	40	44
DAMPING VALUE = 0.030	0.29270	0.39410	0.54910	0.69990	1.06040	1.6540	3.35140	1.42580	0.68880	0.63420	0.63420

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ; DIRECTION 3; DAMPING = 0.03  
AT ELEVATION 899.50

FIGURE NO.	1	5	9	13	17	21	25	29	33	37	41
BROADENED SPECTRUM FOR MODE= 416	0.23300	0.30450	0.38990	0.57200	0.73100	0.91200	3.21200	2.75100	0.94570	0.53650	0.53650
DEGREE OF FREEDOM = 3	0.9450	0.36920	0.54260	0.67870	0.97640	3.56590	2.75100	0.94570	0.53650	0.53650	0.53650
AT ELEVATION 899.50	1.3680	1.8720	2.9970	5.0040	7.4970	11.3740	17.1169	34.8150	44.0000	44.0000	44.0000
DAMPING = 0.03	0.24610	0.36920	0.54260	0.67870	0.97640	3.56590	2.75100	0.94570	0.53650	0.53650	0.53650
NO. OF SPECTRA = 1	3	7	11	15	19	23	27	31	35	39	43
DAMPING VALUE = 0.030	1.0004	1.4490	2.1587	3.7082	5.6250	7.5600	14.6630	22.6380	44.0000	44.0000	44.0000
SET NO. = 6	4	8	12	16	20	24	28	32	36	40	44
DAMPING VALUE = 0.030	0.29190	0.38990	0.57200	0.69460	1.11630	1.76980	3.56590	1.06690	0.55750	0.55750	0.55750



TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ ; DAMPING = 0.03  
FIGURE NO. 417-B DIRECTION 3 AT ELEVATION 860.00

SET NO. = 9

NO. OF SPECTRA = 1

BROADENED SPECTRUM FOR NODE= 417			DEGREE OF FREEDOM =		NUMBER OF GRIDS = 37		DAMPING VALUE = 0.030	
1	0.9000	0.23060	2	0.9450	3	1.0004	4	1.0620
5	1.2870	0.30130	6	1.3680	7	1.5030	8	1.5664
9	1.8720	0.52930	10	2.1781	11	2.2500	12	2.6496
13	2.9970	0.63340	14	3.6630	15	3.6652	16	3.7530
17	4.0950	0.64980	18	4.5000	19	5.0040	20	5.6250
21	6.4260	1.54580	22	7.2090	23	7.4970	24	9.1630
25	9.2400	2.36440	26	10.2333	27	11.3740	28	14.6630
29	15.2400	0.60560	30	16.0160	31	18.5361	32	22.0000
33	22.6380	0.53260	34	30.7119	35	34.8150	36	36.7589
37	40.0000	0.32243						0.32243

SET NO. = 12

NO. OF SPECTRA = 1

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ ; DAMPING = 0.03  
FIGURE NO. 418-B DIRECTION 3 AT ELEVATION 841.00

BROADENED SPECTRUM FOR NODE= 418			DEGREE OF FREEDOM =		NUMBER OF GRIDS = 37		DAMPING VALUE = 0.030	
1	0.9000	0.23010	2	0.9450	3	1.0003	4	1.0620
5	1.2870	0.30090	6	1.3680	7	1.5030	8	1.5661
9	1.8720	0.52610	10	2.1835	11	2.2500	12	2.7123
13	2.8170	0.57660	14	2.9970	15	3.6630	16	3.6899
17	3.7530	0.61820	18	4.5000	19	5.0040	20	5.6250
21	6.4260	1.40170	22	7.2090	23	7.4970	24	9.1630
25	9.2400	2.07660	26	10.3617	27	11.0000	28	11.3740
29	14.6630	0.57220	30	14.8716	31	16.0160	32	16.8245
33	22.0000	0.54090	34	30.9157	35	34.8150	36	36.8887
37	40.0000	0.26660						0.26660

SET NO. = 15

NO. OF SPECTRA = 1

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ ; DAMPING = 0.03  
FIGURE NO. 419-B DIRECTION 3 AT ELEVATION 825.00

BROADENED SPECTRUM FOR NODE= 419			DEGREE OF FREEDOM =		NUMBER OF GRIDS = 36		DAMPING VALUE = 0.030	
1	0.9000	0.22980	2	0.9450	3	0.9999	4	1.0620
5	1.2870	0.30060	6	1.3680	7	1.5030	8	1.5657
9	1.8720	0.52290	10	2.1891	11	2.2500	12	2.7151
13	2.8170	0.57210	14	2.9970	15	3.6630	16	3.7166
17	3.7530	0.60170	18	5.0040	19	5.6250	20	6.4260
21	7.2090	1.73010	22	7.4970	23	9.1630	24	9.2400
25	10.1860	1.15230	26	10.3950	27	11.0000	28	11.3740
29	14.2446	0.57560	30	16.0160	31	17.7374	32	22.0000
33	22.6380	0.46310	34	32.1946	35	34.8150	36	44.0000
								0.22520

SET NO. = 18

NO. OF SPECTRA = 1

TUSI-REFINED RESPONSE SPECTRA FOR FUEL BUILDING;  
FLOOR RESPONSE SPECTRA FOR SSE; COMPONENT AZ ; DAMPING = 0.03  
FIGURE NO. 420-B DIRECTION 3 AT ELEVATION 810.50

BROADENED SPECTRUM FOR NODE= 420			DEGREE OF FREEDOM =		NUMBER OF GRIDS = 36		DAMPING VALUE = 0.030	
1	0.9000	0.22960	2	0.9450	3	0.9995	4	1.0620
5	1.2870	0.30030	6	1.3680	7	1.5030	8	1.5656
9	1.8720	0.51980	10	2.1937	11	2.2500	12	2.7180
13	2.8170	0.56760	14	2.9970	15	3.6630	16	3.7461
17	3.7530	0.58570	18	4.5000	19	5.0040	20	5.6250
								0.91430

21	6.4260	1.11630	22	7.2090	1.50870	23	7.4970	1.55460	24	9.1630	1.55460
25	9.2400	1.52870	26	10.1860	0.95350	27	11.4070	0.85950	28	14.2817	0.56520
29	16.0160	0.56520	30	18.1207	0.47900	31	20.0750	0.47900	32	22.0000	0.47610
33	24.6620	0.36150	34	32.4444	0.22500	35	34.8150	0.22500	36	44.0000	0.20750