Appendix C - Statistical Analysis

Data Analysis for Soil Liquefaction - Loose

General Linear Models Procedure
Class Level Information

Class	Levels	Values
STRESS	3	h l m
VIBRATE	2	n v
TYPE	2	10 15
CENTER	2	c o

Number of observations in data set = 37

NOTE: Due to missing values, only 33 observations can be used in this analysis.

Data Analysis for Soil Liquefaction

General Linear Models Procedure

Dependent Variable: SOIL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	19	2129.09325758	112.0575398	751.23	0.0001
Error	13	28.43563333	2.18735641		
Corrected Total	32	2157.52889091			

R-Square	C.V.	Root MSE	SOIL Mean
0.986820	5.514061	1.47897140	26.82181818

Source	DF	Type I SS	Mean Square	F Value	Pr > F
STRESS	2	655.67012948	327.83506474	149.88	0.0001
VIBRATE	1	863.26890354	863.26890354	394.66	0.0001
STRESS*VIBRATE	2	584.25191027	292.12595513	133.55	0.0001
TYPE	1	2.21826276	2.21826276	1.01	0.3323
STRESS*TYPE	2	3.21158054	1.60579027	0.73	0.4988
VIBRATE*TYPE	1	3.87252914	3.87252914	1.77	0.2062
STRESS*VIBRATE*TYPE	2	2.62013852	1.31006926	0.60	0.5639
CENTER	1	0.16734574	0.16734574	0.08	0.7864
STRESS*CENTER	2	1.36603191	0.68301595	0.31	0.7371
VIBRATE*CENTER	1	2.53033912	2.53033912	1.16	0.3017
STRESS*VIBRAT*CENTER		1.54831696	0.77415848	0.35	0.7085
TYPE*CENTER	1	1.24082402	1.24082402	0.57	0.4648
STRESS*TYPE*CENTER	0	0.00000000	.	.	.
VIBRATE*TYPE*CENTER	1	7.12694559	7.12694559	3.26	0.0943
STRE*VIBR*TYPE*CENTE	0	0.00000000	.	.	.

Source	DF	Type III SS	Mean Square	F Value	Pr > F
STRESS	2	395.97979143	197.98989572	90.52	0.0001
VIBRATE	1	629.41723466	629.41723466	287.75	0.0001
STRESS*VIBRATE	2	357.72074390	178.86037195	81.77	0.0001
TYPE	1	1.21588698	1.21588698	0.56	0.4692
STRESS*TYPE	2	3.02734019	1.51367009	0.69	0.5181
VIBRATE*TYPE	1	0.90838018	0.90838018	0.42	0.5305
STRESS*VIBRATE*TYP	2	7.82878505	3.91439252	1.79	0.2058
CENTER	1	0.20967139	0.20967139	0.10	0.7618
STRESS*CENTER	2	1.29032121	0.64516061	0.29	0.7494
VIBRATE*CENTER	1	2.72881890	2.72881890	1.25	0.2842
STRESS*VIBRAT*CENTER	2	1.84333939	0.92166970	0.42	0.6648
TYPE*CENTER	1	1.24082402	1.24082402	0.57	0.4648
STRESS*TYPE*CENTER	0	0.00000000	.	.	.
VIBRATE*TYPE*CENTER	1	7.12694559	7.12694559	3.26	0.0943
STRE*VIBR*TYPE*CENTE	0	0.00000000	.	.	

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: SOIL
NOTE: This test controls the type I experimentwise error rate.
Alpha= 0.05 Confidence= 0.95 df= 13 MSE= 2.187356
Critical Value of Studentized Range= 3.734
Comparisons significant at the 0.05 level are indicated by '***'.

STRESS Comparison	Simultaneous Lower Confidence Limit	Simultaneous Difference Between Means	Upper Confidence Limit	
h - m	1.4750	3.2693	5.0636	***
h - l	8.5956	10.2124	11.8293	***
m - h	-5.0636	-3.2693	-1.4750	***
m - l	5.2746	6.9431	8.6115	***
l - h	-11.8293	-10.2124	-8.5956	***
l - m	-8.6115	-6.9431	-5.2746	***

Data Analysis for Soil Liquefaction
General Linear Models Procedure
Tukey's Studentized Range (HSD) Test for variable: SOIL

NOTE: This test controls the type I experimentwise error rate.
Alpha= 0.05 Confidence 0.95 df= 13 MSE= 2.187356
Critical Value of Studentized Range= 3.055
Comparisons significant at the 0.05 level are indicated by '***'.

VIBRATE Comparison	Simultaneous Lower Confidence Limit	Simultaneous Difference Between Means	Upper Confidence Limit	
n - v	9.8753	10.9923	12.1094	***
v - n	-12.1094	-10.9923	-9.8753	***

Data Analysis for Soil Liquefaction
General Linear Models Procedure
Tukey's Studentized Range (HSD) Test for variable: SOIL

NOTE: This test controls the type I experimentwise error rate.
Alpha= 0.05 Confidence = 0.95 df= 13 MSE= 2.187356
Critical Value of Studentized Range = 3.055
Comparisons significant at the 0.05 level are indicated by '***'.

TYPE Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	
10 - 15	1.9482	3.0611	4.1740	***
15 - 10	-4.1740	-3.0611	-1.9482	***

Data Analysis for Soil Liquefaction
General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: SOIL
NOTE: This test controls the type I experimentwise error rate.
Alpha= 0.05 Confidence 0.95 df= 13 MSE= 2.187356
Critical Value of Studentized Range= 3.055
Comparisons significant at the 0.05 level are indicated by '***'.

CENTER Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	
c - o	1.2122	2.3292	3.4463	***
o - c	-3.4463	-2.3292	-1.2122	***

Appendix C

Data Analysis for Soil Liquefaction General Linear Models Procedure - Loose

			----------SOIL----------	
STRESS	VIBRATE	N	Mean	SD
h	n	6	32.2183333	0.84601221
h	v	4	31.7875000	0.93510695
l	n	7	31.7028571	1.9742485
l	v	7	11.9642857	1.09267039
m	n	5	31.5000000	1.87056141
m	v	4	25.3725000	1.09399497

			----------SOIL----------	
STRESS	TYPE	N	Mean	SD
h	10	6	32.2333333	0.8051501
h	15	4	31.7650000	0.9797449
l	10	4	22.7600000	12.3038395
l	15	10	21.4630000	10.1938381
m	10	6	28.3233333	3.8188096
m	15	3	29.6833333	3.4933413

			----------SOIL----------	
STRESS	CENTER	N	Mean	SD
h	c	7	31.8742857	0.7380799
h	o	3	32.4466667	1.1599282
l	c	6	21.9600000	10.4334098
l	o	8	21.7387500	11.0177823
m	c	5	29.3940000	3.5741754
m	o	4	28.0050000	3.9002692

			----------SOIL----------	
VIBRATE	TYPE	N	Mean	SD
n	10	9	32.3733333	1.10789214
n	15	9	31.2633333	1.84244403
v	10	7	23.2885714	8.27605870
v	15	8	18.6712500	9.53066845

			----------SOIL----------	
VIBRATE	CENTER	N	Mean	SD
n	c	10	31.6520000	1.95061700
n	o	8	32.0262500	1.04567050
v	c	8	23.1662500	9.08521395
v	o	7	18.1514286	8.70548185

			SOIL	
TYPE	CENTER	N	Mean	SD
10	c	7	28.6500000	7.8594041
10	o	9	28.2033333	6.8405464
15	c	11	27.3909091	7.4475787
15	o	6	21.5733333	11.3884462

				SOIL	
STRESS	VIBRATE	TYPE	N	Mean	SD
h	n	10	4	32.3200000	1.01544736
h	n	15	2	32.0150000	0.60104076
h	v	10	2	32.0600000	0.24041631
h	v	15	2	31.5150000	1.50613744
l	n	10	2	33.3850000	1.60513239
l	n	15	5	31.0300000	1.79489554
l	v	10	2	12.1350000	0.12020815
l	v	15	5	11.8960000	1.32924038
m	n	10	3	31.7700000	0.70682388
m	n	15	2	31.0950000	3.52846284
m	v	10	3	24.8766667	0.56580326
m	v	15	1	26.8600000	.

				SOIL	
STRESS	VIBRATE	CENTER	N	Mean	SD
h	n	c	4	31.9650000	0.44064347
h	n	o	2	32.7250000	1.49199531
h	v	c	3	31.7533333	1.14220547
h	v	o	1	31.8900000	.
l	n	c	3	31.3000000	3.08097387
l	n	o	4	32.0050000	1.08767336
l	v	c	3	12.6200000	0.97000000
l	v	o	4	11.4725000	1.00407088
m	n	c	3	31.5866667	2.63632952
m	n	o	2	31.3700000	0.19798990
m	v	c	2	26.1050000	1.06773124
m	v	o	2	24.6400000	0.55154329

				SOIL	
VIBRATE	TYPE	CENTER	N	Mean	SD
n	10	c	4	32.7300000	1.2608727
n	10	o	5	32.0880000	1.0166219
n	15	c	6	30.9333333	2.0845879
n	15	o	3	31.9233333	1.3170168
v	10	c	3	23.2100000	10.2587914
v	10	o	4	23.3475000	8.1739602
v	15	c	5	23.1400000	9.5824449
v	15	o	3	11.2233333	1.0675829

					----------SOIL----------	
STRESS	VIBRATE	TYPE	CENTER	N	Mean	SD
h	n	10	c	2	31.9150000	0.45961941
h	n	10	o	2	32.7250000	1.49199531
h	n	15	c	2	32.0150000	0.60104076
h	v	10	c	1	32.2300000	.
h	v	10	o	1	31.8900000	.
h	v	15	c	2	31.5150000	1.50613744
l	n	10	c	1	34.5200000	.
l	n	10	o	1	32.2500000	.
l	n	15	c	2	29.6900000	1.85261977
l	n	15	o	3	31.9233333	1.31701683
l	v	10	c	1	12.0500000	.
l	v	10	o	1	12.2200000	.
l	v	15	c	2	12.9050000	1.18086832
l	v	15	o	3	11.2233333	1.06758294
m	n	10	c	1	32.5700000	.
m	n	10	o	2	31.3700000	0.19798990
m	n	15	c	2	31.0950000	3.52846284
m	v	10	c	1	25.3500000	.
m	v	10	o	2	24.6400000	0.55154326
m	v	15	c	1	26.8600000	.

Data Analysis for Soil Liquefaction The MIXED Procedure - Loose

Class Level Information

Class	Levels	Values
STRESS	3	h l m
VIBRATE	2	n v
TYPE	2	10 15
CENTER	2	c o

Covariance Parameter Estimates (REML)

Cov Parm	Estimate
Residual	2.18735641

Model Fitting Information for SOIL

Description	Value
Observations	33.0000
Res Log Likelihood	-27.7515
Akaike's Information Criterion	-28.7515
Schwarz's Bayesian Criterion	-29.0340
-2 Res Log Likelihood	55.5030

Tests of Fixed Effects

Source	NDF	DDF	Type III F	Pr > F
STRESS	2	13	90.52	0.0001
VIBRATE	1	13	287.75	0.0001
STRESS*VIBRATE	2	13	81.77	0.0001
TYPE	1	13	0.56	0.4692
STRESS*TYPE	2	13	0.69	0.5181
VIBRATE*TYPE	1	13	0.42	0.5305
STRESS*VIBRATE*TYPE	2	13	1.79	0.2058
CENTER	1	13	0.10	0.7618
STRESS*CENTER	2	13	0.29	0.7494
VIBRATE*CENTER	1	13	1.25	0.2842
STRESS*VIBRAT*CENTER	2	13	0.42	0.6648
TYPE*CENTER	1	13	0.57	0.4648
STRESS*TYPE*CENTER	0	.	.	.
VIBRATE*TYPE*CENTER	1	13	3.26	0.0943
STRE*VIBR*TYPE*CENTE	0	.	.	.

Data Analysis for Soil - Loose

Differences of Least Squares Means

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment	Adj P	Adj Low	Adj Upp
STR.	h				l				TK	.	.	
STR.	h				m				TK	.	.	.
STR.	l				m				TK	.	.	.
VIBR.		n				v			TK	.	.	.
TY.			10				15		TK	.	.	.
CENT.				c				o	TK	.	.	.
STR.*VIBR.	h	n			h	v			TK	.	.	.
STR.*VIBR.	h	n			l	n			TK	.	.	.
STR.*VIBR.	h	n			l	v			TK	.	.	.
STR.*VIBR.	h	n			m	n			TK	.	.	.
STR.*VIBR.	h	n			m	v			TK	.	.	.
STR.*VIBR.	h	v			l	n			TK	.	.	.
STR.*VIBR.	h	v			l	v			TK	.	.	.
STR.*VIBR.	h	v			m	n			TK	.	.	.
STR.*VIBR.	h	v			m	v			TK	.	.	.
STR.*VIBR.	l	n			l	v			TK	0.0000	18.0947	21.8978
STR.*VIBR.	l	n			m	n			TK	.	.	.
STR.*VIBR.	l	n			m	v			TK	.	.	.
STR.*VIBR.	l	v			m	n			TK	.	.	.
STR.*VIBR.	l	v			m	v			TK	.	.	.
STR.*VIBR.	m	n			m	v			TK	.	.	.
STR.*TY.	h		10		h		15		TK	.	.	.
STR.*TY.	h		10		l		10		TK	0.0000	6.5587	12.3013
STR.*TY.	h		10		l		15		TK	0.0000	8.4102	13.0990
STR.*TY.	h		10		m		10		TK	0.0061	1.0492	6.3658
STR.*TY.	h		10		m		15		TK	.	.	.
STR.*TY.	h		15		l		10		TK	.	.	. .
STR.*TY.	h		15		l		15		TK	.	.	. .
STR.*TY.	h		15		m		10		TK	.	.	. .
STR.*TY.	h		15		m		15		TK	.	.	. .
STR.*TY.	l		10		l		15		TK	0.4624	-1.2588	3.9080
STR.*TY.	l		10		m		10		TK	0.0003	-8.5938	-2.8512
STR.*TY.	l		10		m		15		TK	.	.	. .
STR.*TY.	l		15		m		10		TK	0.0000	-9.3915	-4.7027
STR.*TY.	l		15		m		15		TK	.	.	. .
STR.*TY.	m		10		m		15		TK	.	.	. .
STR.*CENT.	h			c	h			o	TK	.	.	. .
STR.*CENT.	h			c	l			c	TK	.0000	7.0824	12.1726
STR.*CENT.	h			c	m			c	TK	0.0280	0.2917	5.6083
STR.*CENT.	h			c	m			o	TK	.	.	. .
STR.*CENT.	h			o	l			c	TK	.	.	. .

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment	Adj P	Adj Low	Adj Upp
STR.*CENT.	h			o	l			o	TK	.	.	. .
STR.*CENT.	h			o	m			c	TK	.	.	. .
STR.*CENT.	h			o	m			o	TK	.	.	. .
STR.*CENT.	l			c	l			o	TK	0.9704	-2.1963	2.9705
STR.*CENT.	l			c	m			c	TK	0.0000	-9.4443	-3.9107
STR.*CENT.	l			c	m			o	TK	.	.	. .
STR.*CENT.	l			o	m			c	TK	0.0000	-9.7595	-4.3696
STR.*CENT.	l			o	m			o	TK	.	.	. .
STR.*CENT.	m			c	m			o	TK	.	.	. .
VIBR.*TY.		n	10			n	15		TK	.	.	. .
VIBR.*TY.		n	10			v	10		TK	0.0000	7.8110	11.1790
VIBR.*TY.		n	10			v	15		TK	.	.	. .
VIBR.*TY.		n	15			v	10		TK	.	.	. .
VIBR.*TY.		n	15			v	15		TK	.	.	.
VIBR.*TY.		v	10			v	15		TK	.	.	. .
VIBR.*CENT.		n		c		n		o	TK	.	.	. .
VIBR.*CENT.		n		c		v		c	TK	0.0000	6.8849	10.0801
VIBR.*CENT.		n		c		v		o	TK	.	.	. .
VIBR.*CENT.		n		o		v		c	TK	.	.	. .
VIBR.*CENT.		n		o		v		o	TK	.	.	. .
VIBR.*CENT.		v		c		v		o	TK	.	.	. .
TY.*CENT.			10	c			10	o	TK	0.7349	-1.4682	2.6482
TY.*CENT.			10	c			15	c	TK	0.5739	-1.1934	2.7117
TY.*CENT.			10	c			15	o	TK	.	.	. .
TY.*CENT.			10	o			15	c	TK	0.9681	-1.6717	2.0101
TY.*CENT.			10	o			15	o	TK	.	.	. .
TY.*CENT.			15	c			15	o	TK	.	.	. .
STR.*VIBR.*TY.	h	n	10		h	n	15		TK	.	.	. .
STR.*VIBR.*TY.	h	n	10		h	v	10		TK	1.0000	-4.3128	4.8328
STR.*VIBR.*TY.	h	n	10		h	v	15		TK	.	.	. .
STR.*VIBR.*TY.	h	n	10		l	n	10		TK	0.9876	-5.6378	3.5078
STR.*VIBR.*TY.	h	n	10		l	n	15		TK	0.7894	-2.0614	5.0881
STR.*VIBR.*TY.	h	n	10		l	v	10		TK	0.0000	15.6122	24.7578
STR.*VIBR.*TY.	h	n	10		l	v	15		TK	0.0000	16.6811	23.8306
STR.*VIBR.*TY.	h	n	10		m	n	10		TK	1.0000	-3.8244	4.5244
STR.*VIBR.*TY.	h	n	10		m	n	15		TK	.	.	. .
STR.*VIBR.*TY.	h	n	10		m	v	10		TK	0.0006	3.1506	11.4994
STR.*VIBR.*TY.	h	n	10		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	h	n	15		h	v	10		TK	.	.	. .
STR.*VIBR.*TY.	h	n	15		h	v	15		TK	.	.	. .
STR.*VIBR.*TY.	h	n	15		l	n	10		TK	.	.	. .
STR.*VIBR.*TY.	h	n	15		l	n	15		TK	.	.	. .
STR.*VIBR.*TY.	h	n	15		l	v	10		TK	.	.	. .
STR.*VIBR.*TY.	h	n	15		l	v	15		TK	.	.	. .

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment	Adj P	Adj Low	Adj Upp
STR.*VIBR.*TY.	h	n	15		m	n	10		TK	.	.	. .
STR.*VIBR.*TY.	h	n	15		m	n	15		TK	.	.	. .
STR.*VIBR.*TY.	h	n	15		m	v	10		TK	.	.	. .
STR.*VIBR.*TY.	h	n	15		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	h	v	10		h	v	15		TK	.	.	. .
STR.*VIBR.*TY.	h	v	10		l	n	10		TK	0.9813	-6.6052	3.9552
STR.*VIBR.*TY.	h	v	10		l	n	15		TK	0.9651	-3.1906	5.6973
STR.*VIBR.*TY.	h	v	10		l	v	10		TK	0.0000	14.6448	25.2052
STR.*VIBR.*TY.	h	v	10		l	v	15		TK	0.0000	15.5519	24.4398
STR.*VIBR.*TY.	h	v	10		m	n	10		TK	1.0000	-4.8492	5.0292
STR.*VIBR.*TY.	h	v	10		m	n	15		TK	.	.	. .
STR.*VIBR.*TY.	h	v	10		m	v	10		TK	0.0036	2.1258	12.0042
STR.*VIBR.*TY.	h	v	10		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	h	v	15		l	n	10		TK	.	.	. .
STR.*VIBR.*TY.	h	v	15		l	n	15		TK	.	.	. .
STR.*VIBR.*TY.	h	v	15		l	v	10		TK	.	.	. .
STR.*VIBR.*TY.	h	v	15		l	v	15		TK	.	.	. .
STR.*VIBR.*TY.	h	v	15		m	n	10		TK	.	.	. .
STR.*VIBR.*TY.	h	v	15		m	n	15		TK	.	.	. .
STR.*VIBR.*TY.	h	v	15		m	v	10		TK	.	.	. .
STR.*VIBR.*TY.	h	v	15		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	l	n	10		l	n	15		TK	0.4768	-1.8656	7.0223
STR.*VIBR.*TY.	l	n	10		l	v	10		TK	0.0000	15.9698	26.5302
STR.*VIBR.*TY.	l	n	10		l	v	15		TK	0.0000	16.8769	25.7648
STR.*VIBR.*TY.	l	n	10		m	n	10		TK	0.9622	-3.5242	6.3542
STR.*VIBR.*TY.	l	n	10		m	n	15		TK	.	.	. .
STR.*VIBR.*TY.	l	n	10		m	v	10		TK	0.0008	3.4508	13.3292
STR.*VIBR.*TY.	l	n	10		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	l	n	15		l	v	10		TK	0.0000	14.2277	23.1156
STR.*VIBR.*TY.	l	n	15		l	v	15		TK	0.0000	15.3341	22.1509
STR.*VIBR.*TY.	l	n	15		m	n	10		TK	0.9609	-5.1962	2.8695
STR.*VIBR.*TY.	l	n	15		m	n	15		TK	.	.	. .
STR.*VIBR.*TY.	l	n	15		m	v	10		TK	0.0034	1.7788	9.8445
STR.*VIBR.*TY.	l	n	15		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	l	v	10		l	v	15		TK	1.0000	-4.3731	4.5148
STR.*VIBR.*TY.	l	v	10		m	n	10		TK	0.0000	-24.7742	-14.8958
STR.*VIBR.*TY.	l	v	10		m	n	15		TK	.	.	. .
STR.*VIBR.*TY.	l	v	10		m	v	10		TK	0.0000	-17.7992	-7.9208
STR.*VIBR.*TY.	l	v	10		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	l	v	15		m	n	10		TK	0.0000	-23.9387	-15.8730
STR.*VIBR.*TY.	l	v	15		m	n	15		TK	.	.	. .
STR.*VIBR.*TY.	l	v	15		m	v	10		TK	0.0000	-16.9637	-8.8980
STR.*VIBR.*TY.	l	v	15		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	m	n	10		m	n	15		TK	.	.	. .

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment	Adj P	Adj Low	Adj Upp
STR.*VIBR.*TY.	m	n	10		m	v	10		TK	0.0021	2.4022	11.5478
STR.*VIBR.*TY.	m	n	10		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	m	n	15		m	v	10		TK	.	.	. .
STR.*VIBR.*TY.	m	n	15		m	v	15		TK	.	.	. .
STR.*VIBR.*TY.	m	v	10		m	v	15		TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		c	h	n		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		c	h	v		c	TK	1.0000	-4.0819	4.2669
STR.*VIBRAT*CENT.	h	n		c	h	v		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		c	l	n		c	TK	1.0000	-4.3144	4.0344
STR.*VIBRAT*CENT.	h	n		c	l	n		o	TK	1.0000	-4.1545	3.9112
STR.*VIBRAT*CENT.	h	n		c	l	v		c	TK	0.0000	15.3131	23.6619
STR.*VIBRAT*CENT.	h	n		c	l	v		o	TK	0.0000	16.2105	24.2762
STR.*VIBRAT*CENT.	h	n		c	m	n		c	TK	1.0000	-4.0419	4.3069
STR.*VIBRAT*CENT.	h	n		c	m	n		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		c	m	v		c	TK	0.0089	1.2872	10.4328
STR.*VIBRAT*CENT.	h	n		c	m	v		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	h	v		c	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	h	v		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	l	n		c	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	l	n		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	l	v		c	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	l	v		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	m	n		c	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	m	n		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	m	v		c	TK	.	.	. .
STR.*VIBRAT*CENT.	h	n		o	m	v		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	v		c	h	v		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	v		c	l	n		c	TK	1.0000	-4.8053	4.3403
STR.*VIBRAT*CENT.	h	v		c	l	n		o	TK	1.0000	-4.6581	4.2298
STR.*VIBRAT*CENT.	h	v		c	l	v		c	TK	0.0000	14.8222	23.9678
STR.*VIBRAT*CENT.	h	v		c	l	v		o	TK	0.0000	15.7069	24.5948
STR.*VIBRAT*CENT.	h	v		c	m	n		c	TK	1.0000	-4.5328	4.6128
STR.*VIBRAT*CENT.	h	v		c	m	n		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	v		c	m	v		c	TK	0.0179	0.8283	10.7067
STR.*VIBRAT*CENT.	h	v		c	m	v		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	v		o	l	n		c	TK	.	.	. .
STR.*VIBRAT*CENT.	h	v		o	l	n		o	TK	.	.	. .
STR.*VIBRAT*CENT.	h	v		o	l	v		c	TK	.	.	. .
STR.*VIBRAT*CENT.	h	v		o	l	v		o	TK	.	.	.
STR.*VIBRAT*CENT.	h	v		o	m	n		c	TK	.	.	. .
STR.*VIBRAT*CENT.	h	v		o	m	n		o	TK	.	.	.
STR.*VIBRAT*CENT.	h	v		o	m	v		c	TK	.	.	. .
STR.*VIBRAT*CENT.	h	v		o	m	v		o	TK	.	.	. .
STR.*VIBRAT*CENT.	l	n		c	l	n		o	TK	1.0000	-4.4256	4.4623

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment		Adj P	Adj Low	Adj Upp
STR.*VIBRAT*CENT.	l	n		c	l	v		c	TK		0.0000	15.0547	24.2003
STR.*VIBRAT*CENT.	l	n		c	l	v		o	TK		0.0000	15.9394	24.8273
STR.*VIBRAT*CENT.	l	n		c	m	n		c	TK		1.0000	-4.3003	4.8453
STR.*VIBRAT*CENT.	l	n		c	m	n		o	TK	.	.	.	. .
STR.*VIBRAT*CENT.	l	n		c	m	v		c	TK		0.0134	1.0608	10.9392
STR.*VIBRAT*CENT.	l	n		c	m	v		o	TK	.	.	.	.
. .													
STR.*VIBRAT*CENT.	l	n		o	l	v		c	TK		0.0000	15.1652	24.0531
STR.*VIBRAT*CENT.	l	n		o	l	v		o	TK		0.0000	16.0537	24.6763
STR.*VIBRAT*CENT.	l	n		o	m	n		c	TK		1.0000	-4.1898	4.6981
STR.*VIBRAT*CENT.	l	n		o	m	n		o	TK	.	.	.	. .
STR.*VIBRAT*CENT.	l	n		o	m	v		c	TK		0.0114	1.1615	10.8018
STR.*VIBRAT*CENT.	l	n		o	m	v		o	TK	.	.	.	. .
STR.*VIBRAT*CENT.	l	v		c	l	v		o	TK		0.9981	-3.6881	5.1998
STR.*VIBRAT*CENT.	l	v		c	m	n		c	TK		0.0000	-23.9278	-14.7822
STR.*VIBRAT*CENT.	l	v		c	m	n		o	TK	..	.		
STR.*VIBRAT*CENT.	l	v		c	m	v		c	TK		0.0000	-18.5667	-8.6883
STR.*VIBRAT*CENT.	l	v		c	m	v		o	TK	.	.	.	.
. .													
STR.*VIBRAT*CENT.	l	v		o	m	n		c	TK		0.0000	-24.5548	-15.6669
STR.*VIBRAT*CENT.	l	v		o	m	n		o	TK	..	.		
STR.*VIBRAT*CENT.	l	v		o	m	v		c	TK		0.0000	-19.2035	-9.5632
STR.*VIBRAT*CENT.	l	v		o	m	v		o	TK	..	.		
STR.*VIBRAT*CENT.	m	n		c	m	n		o	TK	..	.		
STR.*VIBRAT*CENT.	m	n		c	m	v		c	TK		0.0188	0.7883	10.6667
STR.*VIBRAT*CENT.	m	n		c	m	v		o	TK	..	.		
STR.*VIBRAT*CENT.	m	n		o	m	v		c	TK	..	.		
STR.*VIBRAT*CENT.	m	n		o	m	v		o	TK	..	.		
STR.*VIBRAT*CENT.	m	v		c	m	v		o	TK	..	.		
VIBR.*TY.*CENT.		n	10	c		n	10	o	TK		0.9525	-2.5813	4.3546
VIBR.*TY.*CENT.		n	10	c		n	15	c	TK		0.3453	-1.2013	5.3380
VIBR.*TY.*CENT.		n	10	c		n	15	o	TK	..	.		
VIBR.*TY.*CENT.		n	10	c		v	10	c	TK		0.0000	5.9577	13.6256
VIBR.*TY.*CENT.		n	10	c		v	10	o	TK		0.0000	6.4294	13.7406
VIBR.*TY.*CENT.		n	10	c		v	15	c	TK		0.0000	5.7737	12.7096
VIBR.*TY.*CENT.		n	10	c		v	15	o	TK	..	.	.	
VIBR.*TY.*CENT.		n	10	o		n	15	c	TK		0.7898	-1.8768	4.2401
VIBR.*TY.*CENT.		n	10	o		n	15	o	TK	..	.		
VIBR.*TY.*CENT.		n	10	o		v	10	c	TK		0.0000	5.2494	12.5606
VIBR.*TY.*CENT.		n	10	o		v	10	o	TK		0.0000	5.7304	12.6663
VIBR.*TY.*CENT.		n	10	o		v	15	c	TK		0.0000	5.0854	11.6246
VIBR.*TY.*CENT.		n	10	o		v	15	o	TK	..	.		
VIBR.*TY.*CENT.		n	15	c		n	15	o	TK	..	.		
VIBR.*TY.*CENT.		n	15	c		v	10	c	TK		0.0001	4.2554	11.1913

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment		Adj P	Adj Low	Adj Upp
VIBR.*TY.*CENT.		n	15	c		v	10	o	TK		0.0000	4.7470	11.2863
VIBR.*TY.*CENT.		n	15	c		v	15	c	TK		0.0000	4.1149	10.2318
VIBR.*TY.*CENT.		n	15	c		v	15	o	TK	.	..	.	
VIBR.*TY.*CENT.		n	15	o		v	10	c	TK	.	..	.	
VIBR.*TY.*CENT.		n	15	o		v	10	o	TK	.	..	.	
VIBR.*TY.*CENT.		n	15	o		v	15	c	TK	.	..	.	
VIBR.*TY.*CENT.		n	15	o		v	15	o	TK	.	..	.	
VIBR.*TY.*CENT.		v	10	c		v	10	o	TK		0.9998	-3.5406	4.1273
VIBR.*TY.*CENT.		v	10	c		v	15	c	TK		0.9953	-4.2056	3.1056
VIBR.*TY.*CENT.		v	10	c		v	15	o	TK	..	.	.	
VIBR.*TY.*CENT.		v	10	o		v	15	c	TK		0.9612	-4.3113	2.6246
VIBR.*TY.*CENT.		v	10	o		v	15	o	TK	.	..	.	
VIBR.*TY.*CENT.		v	15	c		v	15	o	TK	.	.	.	
STRE*VIBR*TY.*CENTE	h	n	10	c	h	n	10	o	TK		1.0000	-7.2014	5.5814
STRE*VIBR*TY.*CENTE	h	n	10	c	h	n	15	c	TK		1.0000	-6.4914	6.2914
STRE*VIBR*TY.*CENTE	h	n	10	c	h	v	10	c	TK		1.0000	-8.1428	7.5128
STRE*VIBR*TY.*CENTE	h	n	10	c	h	v	10	o	TK		1.0000	-7.8028	7.8528
STRE*VIBR*TY.*CENTE	h	n	10	c	h	v	15	c	TK		1.0000	-5.9914	6.7914
STRE*VIBR*TY.*CENTE	h	n	10	c	l	n	10	c	TK		0.9880	-10.4328	5.2228
STRE*VIBR*TY.*CENTE	h	n	10	c	l	n	10	o	TK		1.0000	-8.1628	7.4928
STRE*VIBR*TY.*CENTE	h	n	10	c	l	n	15	c	TK		0.9819	-4.1664	8.6164
STRE*VIBR*TY.*CENTE	h	n	10	c	l	n	15	o	TK		1.0000	-5.8429	5.8262
STRE*VIBR*TY.*CENTE	h	n	10	c	l	v	10	c	TK		0.0000	12.0372	27.6928
STRE*VIBR*TY.*CENTE	h	n	10	c	l	v	10	o	TK		0.0000	11.8672	27.5228
STRE*VIBR*TY.*CENTE	h	n	10	c	l	v	15	c	TK		0.0000	12.6186	25.4014
STRE*VIBR*TY.*CENTE	h	n	10	c	l	v	15	o	TK		0.0000	14.8571	26.5262
STRE*VIBR*TY.*CENTE	h	n	10	c	m	n	10	c	TK		1.0000	-8.4828	7.1728
STRE*VIBR*TY.*CENTE	h	n	10	c	m	n	10	o	TK		1.0000	-5.8464	6.9364
STRE*VIBR*TY.*CENTE	h	n	10	c	m	n	15	c	TK		1.0000	-5.5714	7.2114
STRE*VIBR*TY.*CENTE	h	n	10	c	m	v	10	c	TK		0.0464	1.2628	14.3928
STRE*VIBR*TY.*CENTE	h	n	10	c	m	v	10	o	TK		0.0194	0.8836	13.6664
STRE*VIBR*TY.*CENTE	h	n	10	c	m	v	15	c	TK		0.0450	2.7728	12.8828
STRE*VIBR*TY.*CENTE	h	n	10	o	h	n	15	c	TK		1.0000	-5.6814	7.1014
STRE*VIBR*TY.*CENTE	h	n	10	o	h	v	10	c	TK		1.0000	-7.3328	8.3228
STRE*VIBR*TY.*CENTE	h	n	10	o	h	v	10	o	TK		1.0000	-6.9928	8.6628
STRE*VIBR*TY.*CENTE	h	n	10	o	h	v	15	c	TK		1.0000	-5.1814	7.6014
STRE*VIBR*TY.*CENTE	h	n	10	o	l	n	10	c	TK		0.9998	-9.6228	6.0328
STRE*VIBR*TY.*CENTE	h	n	10	o	l	n	10	o	TK		1.0000	-7.3528	8.3028
STRE*VIBR*TY.*CENTE	h	n	10	o	l	n	15	c	TK		0.8338	-3.3564	9.4264
STRE*VIBR*TY.*CENTE	h	n	10	o	l	n	15	o	TK		1.0000	-5.0329	6.6362
STRE*VIBR*TY.*CENTE	h	n	10	o	l	v	10	c	TK		0.0000	12.8472	28.5028
STRE*VIBR*TY.*CENTE	h	n	10	o	l	v	10	o	TK		0.0000	12.6772	28.3328
STRE*VIBR*TY.*CENTE	h	n	10	o	l	v	15	c	TK		0.0000	13.4286	26.2114
STRE*VIBR*TY.*CENTE	h	n	10	o	l	v	15	o	TK		0.0000	15.6671	27.3362

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment	Adj P	Adj Low	Adj Upp
STRE*VIBR*TY.*CENTE	h	n	10	o	m	n	10	c	TK	1.0000	-7.6728	7.9828
STRE*VIBR*TY.*CENTE	h	n	10	o	m	n	10	o	TK	0.9999	-5.0364	7.7464
STRE*VIBR*TY.*CENTE	h	n	10	o	m	n	15	c	TK	0.9993	-4.7614	8.0214
STRE*VIBR*TY.*CENTE	h	n	10	o	m	v	10	c	TK	0.0640	0.4528	15.2028
STRE*VIBR*TY.*CENTE	h	n	10	o	m	v	10	o	TK	0.0082	1.6936	14.4764
STRE*VIBR*TY.*CENTE	h	n	10	o	m	v	15	c	TK	0.0539	1.9628	13.6928
STRE*VIBR*TY.*CENTE	h	n	15	c	h	v	10	c	TK	1.0000	-8.0428	7.6128
STRE*VIBR*TY.*CENTE	h	n	15	c	h	v	10	o	TK	1.0000	-7.7028	7.9528
STRE*VIBR*TY.*CENTE	h	n	15	c	h	v	15	c	TK	1.0000	-5.8914	6.8914
STRE*VIBR*TY.*CENTE	h	n	15	c	l	n	10	c	TK	0.9918	-10.3328	5.3228
STRE*VIBR*TY.*CENTE	h	n	15	c	l	n	10	o	TK	1.0000	-8.0628	7.5928
STRE*VIBR*TY.*CENTE	h	n	15	c	l	n	15	c	TK	0.9736	-4.0664	8.7164
STRE*VIBR*TY.*CENTE	h	n	15	c	l	n	15	o	TK	1.0000	-5.7429	5.9262
STRE*VIBR*TY.*CENTE	h	n	15	c	l	v	10	c	TK	0.0000	12.1372	27.7928
STRE*VIBR*TY.*CENTE	h	n	15	c	l	v	10	o	TK	0.0000	11.9672	27.6228
STRE*VIBR*TY.*CENTE	h	n	15	c	l	v	15	c	TK	0.0000	12.7186	25.5014
STRE*VIBR*TY.*CENTE	h	n	15	c	l	v	15	o	TK	0.0000	14.9571	26.6262
STRE*VIBR*TY.*CENTE	h	n	15	c	m	n	10	c	TK	1.0000	-8.3828	7.2728
STRE*VIBR*TY.*CENTE	h	n	15	c	m	n	10	o	TK	1.0000	-5.7464	7.0364
STRE*VIBR*TY.*CENTE	h	n	15	c	m	n	15	c	TK	1.0000	-5.4714	7.3114
STRE*VIBR*TY.*CENTE	h	n	15	c	m	v	10	c	TK	0.0548	1.1628	14.4928
STRE*VIBR*TY.*CENTE	h	n	15	c	m	v	10	o	TK	0.0174	0.9836	13.7664
STRE*VIBR*TY.*CENTE	h	n	15	c	m	v	15	c	TK	0.0041	2.6728	12.9828
STRE*VIBR*TY.*CENTE	h	v	10	c	h	v	10	o	TK	1.0000	-8.6988	9.3788
STRE*VIBR*TY.*CENTE	h	v	10	c	h	v	15	c	TK	1.0000	-7.1128	8.5428
STRE*VIBR*TY.*CENTE	h	v	10	c	l	n	10	c	TK	0.9994	-11.3288	6.7488
STRE*VIBR*TY.*CENTE	h	v	10	c	l	n	10	o	TK	1.0000	-9.0588	9.0188
STRE*VIBR*TY.*CENTE	h	v	10	c	l	n	15	c	TK	0.9906	-5.2878	10.3678
STRE*VIBR*TY.*CENTE	h	v	10	c	l	n	15	o	TK	1.0000	-7.0735	7.6868
STRE*VIBR*TY.*CENTE	h	v	10	c	l	v	10	c	TK	0.0000	11.1412	29.2188
STRE*VIBR*TY.*CENTE	h	v	10	c	l	v	10	o	TK	0.0000	10.9712	29.0488
STRE*VIBR*TY.*CENTE	h	v	10	c	l	v	15	c	TK	0.0000	11.4972	27.1528
STRE*VIBR*TY.*CENTE	h	v	10	c	l	v	15	o	TK	0.0000	13.6265	28.3868
STRE*VIBR*TY.*CENTE	h	v	10	c	m	n	10	c	TK	1.0000	-9.3788	8.6988
STRE*VIBR*TY.*CENTE	h	v	10	c	m	n	10	o	TK	1.0000	-6.9678	8.6878
STRE*VIBR*TY.*CENTE	h	v	10	c	m	n	15	c	TK	1.0000	-6.6928	8.9628
STRE*VIBR*TY.*CENTE	h	v	10	c	m	v	10	c	TK	0.0066	2.1588	15.9188
STRE*VIBR*TY.*CENTE	h	v	10	c	m	v	10	o	TK	0.0515	0.2378	15.4178
STRE*VIBR*TY.*CENTE	h	v	10	c	m	v	15	c	TK	0.0056	3.6688	14.4088
STRE*VIBR*TY.*CENTE	h	v	10	o	h	v	15	c	TK	1.0000	-7.4528	8.2028
STRE*VIBR*TY.*CENTE	h	v	10	o	l	n	10	c	TK	0.9969	-11.6688	6.4088
STRE*VIBR*TY.*CENTE	h	v	10	o	l	n	10	o	TK	1.0000	-9.3988	8.6788
STRE*VIBR*TY.*CENTE	h	v	10	o	l	n	15	c	TK	0.9979	-5.6278	10.0278
STRE*VIBR*TY.*CENTE	h	v	10	o	l	n	15	o	TK	1.0000	-7.4135	7.3468

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment	Adj P	Adj Low	Adj Upp
STRE*VIBR*TY.*CENTE	h	v	10	o	l	v	10	c	TK	0.0000	10.8012	28.8788
STRE*VIBR*TY.*CENTE	h	v	10	o	l	v	10	o	TK	0.0000	10.6312	28.7088
STRE*VIBR*TY.*CENTE	h	v	10	o	l	v	15	c	TK	0.0000	11.1572	26.8128
STRE*VIBR*TY.*CENTE	h	v	10	o	l	v	15	o	TK	0.0000	13.2865	28.0468
STRE*VIBR*TY.*CENTE	h	v	10	o	m	n	10	c	TK	1.0000	-9.7188	8.3588
STRE*VIBR*TY.*CENTE	h	v	10	o	m	n	10	o	TK	1.0000	-7.3078	8.3478
STRE*VIBR*TY.*CENTE	h	v	10	o	m	n	15	c	TK	1.0000	-7.0328	8.6228
STRE*VIBR*TY.*CENTE	h	v	10	o	m	v	10	c	TK	0.0046	2.4988	15.5788
STRE*VIBR*TY.*CENTE	h	v	10	o	m	v	10	o	TK	0.0524	0.5778	15.0778
STRE*VIBR*TY.*CENTE	h	v	10	o	m	v	15	c	TK	0.0035	4.0088	14.0688
STRE*VIBR*TY.*CENTE	h	v	15	c	l	n	10	c	TK	0.9592	-10.8328	4.8228
STRE*VIBR*TY.*CENTE	h	v	15	c	l	n	10	o	TK	1.0000	-8.5628	7.0928
STRE*VIBR*TY.*CENTE	h	v	15	c	l	n	15	c	TK	0.9975	-4.5664	8.2164
STRE*VIBR*TY.*CENTE	h	v	15	c	l	n	15	o	TK	1.0000	-6.2429	5.4262
STRE*VIBR*TY.*CENTE	h	v	15	c	l	v	10	c	TK	0.0000	11.6372	27.2928
STRE*VIBR*TY.*CENTE	h	v	15	c	l	v	10	o	TK	0.0000	11.4672	27.1228
STRE*VIBR*TY.*CENTE	h	v	15	c	l	v	15	c	TK	0.0000	12.2186	25.0014
STRE*VIBR*TY.*CENTE	h	v	15	c	l	v	15	o	TK	0.0000	14.4571	26.1262
STRE*VIBR*TY.*CENTE	h	v	15	c	m	n	10	c	TK	1.0000	-8.8828	6.7728
STRE*VIBR*TY.*CENTE	h	v	15	c	m	n	10	o	TK	1.0000	-6.2464	6.5364
STRE*VIBR*TY.*CENTE	h	v	15	c	m	n	15	c	TK	1.0000	-5.9714	6.8114
STRE*VIBR*TY.*CENTE	h	v	15	c	m	v	10	c	TK	0.0017	1.6628	13.9928
STRE*VIBR*TY.*CENTE	h	v	15	c	m	v	10	o	TK	0.0298	0.4836	13.2664
STRE*VIBR*TY.*CENTE	h	v	15	c	m	v	15	c	TK	0.0021	3.1728	12.4828
STRE*VIBR*TY.*CENTE	l	n	10	c	l	n	10	o	TK	0.9994	-6.7688	11.3088
STRE*VIBR*TY.*CENTE	l	n	10	c	l	n	15	c	TK	0.5096	-2.9978	12.6578
STRE*VIBR*TY.*CENTE	l	n	10	c	l	n	15	o	TK	0.9802	-4.7835	9.9768
STRE*VIBR*TY.*CENTE	l	n	10	c	l	v	10	c	TK	0.0000	13.4312	31.5088
STRE*VIBR*TY.*CENTE	l	n	10	c	l	v	10	o	TK	0.0000	13.2612	31.3388
STRE*VIBR*TY.*CENTE	l	n	10	c	l	v	15	c	TK	0.0000	13.7872	29.4428
STRE*VIBR*TY.*CENTE	l	n	10	c	l	v	15	o	TK	0.0000	15.9165	30.6768
STRE*VIBR*TY.*CENTE	l	n	10	c	m	n	10	c	TK	0.9999	-7.0888	10.9888
STRE*VIBR*TY.*CENTE	l	n	10	c	m	n	10	o	TK	0.9419	-4.6778	10.9778
STRE*VIBR*TY.*CENTE	l	n	10	c	m	n	15	c	TK	0.8973	-4.4028	11.2528
STRE*VIBR*TY.*CENTE	l	n	10	c	m	v	10	c	TK	0.0453	0.1312	18.2088
STRE*VIBR*TY.*CENTE	l	n	10	c	m	v	10	o	TK	0.0083	2.0522	17.7078
STRE*VIBR*TY.*CENTE	l	n	10	c	m	v	15	c	TK	0.0383	1.3788	16.6988
STRE*VIBR*TY.*CENTE	l	n	10	o	l	n	15	c	TK	0.9898	-5.2678	10.3878
STRE*VIBR*TY.*CENTE	l	n	10	o	l	n	15	o	TK	1.0000	-7.0535	7.7068
STRE*VIBR*TY.*CENTE	l	n	10	o	l	v	10	c	TK	0.0000	11.1612	29.2388
STRE*VIBR*TY.*CENTE	l	n	10	o	l	v	10	o	TK	0.0000	10.9912	29.0688
STRE*VIBR*TY.*CENTE	l	n	10	o	l	v	15	c	TK	0.0000	11.5172	27.1728
STRE*VIBR*TY.*CENTE	l	n	10	o	l	v	15	o	TK	0.0000	13.6465	28.4068
STRE*VIBR*TY.*CENTE	l	n	10	o	m	n	10	c	TK	1.0000	-9.3588	8.7188

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment	Adj P	Adj Low	Adj Upp
STRE*VIBR*TY.*CENTE	l	n	10	o	m	n	10	o	TK	1.0000	-6.9478	8.7078
STRE*VIBR*TY.*CENTE	l	n	10	o	m	n	15	c	TK	1.0000	-6.6728	8.9828
STRE*VIBR*TY.*CENTE	l	n	10	o	m	v	10	c	TK	0.2335	2.1388	15.9388
STRE*VIBR*TY.*CENTE	l	n	10	o	m	v	10	o	TK	0.0004	0.2178	15.4378
STRE*VIBR*TY.*CENTE	l	n	10	o	m	v	15	c	TK	0.5581	-3.6488	14.4288
STRE*VIBR*TY.*CENTE	l	n	15	c	l	n	15	o	TK	0.9601	-8.0679	3.6012
STRE*VIBR*TY.*CENTE	l	n	15	c	l	v	10	c	TK	0.0000	9.8122	25.4678
STRE*VIBR*TY.*CENTE	l	n	15	c	l	v	10	o	TK	0.0000	9.6422	25.2978
STRE*VIBR*TY.*CENTE	l	n	15	c	l	v	15	c	TK	0.0000	10.3936	23.1764
STRE*VIBR*TY.*CENTE	l	n	15	c	l	v	15	o	TK	0.0000	12.6321	24.3012
STRE*VIBR*TY.*CENTE	l	n	15	c	m	n	10	c	TK	0.9710	-10.7078	4.9478
STRE*VIBR*TY.*CENTE	l	n	15	c	m	n	10	o	TK	0.9990	-8.0714	4.7114
STRE*VIBR*TY.*CENTE	l	n	15	c	m	n	15	c	TK	0.9999	-7.7964	4.9864
STRE*VIBR*TY.*CENTE	l	n	15	c	m	v	10	c	TK	0.0084	3.4878	12.1678
STRE*VIBR*TY.*CENTE	l	n	15	c	m	v	10	o	TK	0.0086	1.3414	11.4414
STRE*VIBR*TY.*CENTE	l	n	15	c	m	v	15	c	TK	0.0049	4.9978	10.6578
STRE*VIBR*TY.*CENTE	l	n	15	o	l	v	10	c	TK	0.0000	12.4932	27.2535
STRE*VIBR*TY.*CENTE	l	n	15	o	l	v	10	o	TK	0.0000	12.3232	27.0835
STRE*VIBR*TY.*CENTE	l	n	15	o	l	v	15	c	TK	0.0000	13.1838	24.8529
STRE*VIBR*TY.*CENTE	l	n	15	o	l	v	15	o	TK	0.0000	15.4814	25.9186
STRE*VIBR*TY.*CENTE	l	n	15	o	m	n	10	c	TK	1.0000	-8.0268	6.7335
STRE*VIBR*TY.*CENTE	l	n	15	o	m	n	10	o	TK	1.0000	-5.2812	6.3879
STRE*VIBR*TY.*CENTE	l	n	15	o	m	n	15	c	TK	1.0000	-5.0062	6.6629
STRE*VIBR*TY.*CENTE	l	n	15	o	m	v	10	c	TK	0.0044	0.8068	13.9535
STRE*VIBR*TY.*CENTE	l	n	15	o	m	v	10	o	TK	0.0091	1.4488	13.1179
STRE*VIBR*TY.*CENTE	l	n	15	o	m	v	15	c	TK	0.0021	2.3168	12.4435
STRE*VIBR*TY.*CENTE	l	v	10	c	l	v	10	o	TK	1.0000	-9.2088	8.8688
STRE*VIBR*TY.*CENTE	l	v	10	c	l	v	15	c	TK	1.0000	-8.6828	6.9728
STRE*VIBR*TY.*CENTE	l	v	10	c	l	v	15	o	TK	1.0000	-6.5535	8.2068
STRE*VIBR*TY.*CENTE	l	v	10	c	m	n	10	c	TK	0.0000	-29.5588	-11.4812
STRE*VIBR*TY.*CENTE	l	v	10	c	m	n	10	o	TK	0.0000	-27.1478	-11.4922
STRE*VIBR*TY.*CENTE	l	v	10	c	m	n	15	c	TK	0.0000	-26.8728	-11.2172
STRE*VIBR*TY.*CENTE	l	v	10	c	m	v	10	c	TK	0.0021	-22.3388	-4.2612
STRE*VIBR*TY.*CENTE	l	v	10	c	m	v	10	o	TK	0.0009	-20.4178	-4.7622
STRE*VIBR*TY.*CENTE	l	v	10	c	m	v	15	c	TK	0.0007	-23.8488	-5.7712
STRE*VIBR*TY.*CENTE	l	v	10	o	l	v	15	c	TK	1.0000	-8.5128	7.1428
STRE*VIBR*TY.*CENTE	l	v	10	o	l	v	15	o	TK	1.0000	-6.3835	8.3768
STRE*VIBR*TY.*CENTE	l	v	10	o	m	n	10	c	TK	0.0000	-29.3888	-11.3112
STRE*VIBR*TY.*CENTE	l	v	10	o	m	n	10	o	TK	0.0000	-26.9778	-11.3222
STRE*VIBR*TY.*CENTE	l	v	10	o	m	n	15	c	TK	0.0000	-26.7028	-11.0472
STRE*VIBR*TY.*CENTE	l	v	10	o	m	v	10	c	TK	0.0024	-22.1688	-4.0912
STRE*VIBR*TY.*CENTE	l	v	10	o	m	v	10	o	TK	0.0010	-20.2478	-4.5922
STRE*VIBR*TY.*CENTE	l	v	10	o	m	v	15	c	TK	0.0008	-23.6788	-5.6012
STRE*VIBR*TY.*CENTE	l	v	15	c	l	v	15	o	TK	0.9972	-4.1529	7.5162

Effect	STR.	VIBR.	TY.	CENT.	_STR.	_VIBR.	_TY.	_CENT.	Adjustment	Adj P	Adj Low	Adj Upp
STRE*VIBR*TY.*CENTE	l	v	15	c	m	n	10	c	TK	0.0000	-27.4928	-11.8372
STRE*VIBR*TY.*CENTE	l	v	15	c	m	n	10	o	TK	0.0000	-24.8564	-12.0736
STRE*VIBR*TY.*CENTE	l	v	15	c	m	n	15	c	TK	0.0000	-24.5814	-11.7986
STRE*VIBR*TY.*CENTE	l	v	15	c	m	v	10	c	TK	0.0010	-20.2728	-4.6172
STRE*VIBR*TY.*CENTE	l	v	15	c	m	v	10	o	TK	0.0002	-18.1264	-5.3436
STRE*VIBR*TY.*CENTE	l	v	15	c	m	v	15	c	TK	0.0003	-21.7828	-6.1272
STRE*VIBR*TY.*CENTE	l	v	15	o	m	n	10	c	TK	0.0000	-28.7268	-13.9665
STRE*VIBR*TY.*CENTE	l	v	15	o	m	n	10	o	TK	0.0000	-25.9812	-14.3121
STRE*VIBR*TY.*CENTE	l	v	15	o	m	n	15	c	TK	0.0000	-25.7062	-14.0371
STRE*VIBR*TY.*CENTE	l	v	15	o	m	v	10	c	TK	0.0001	-21.5068	-6.7465
STRE*VIBR*TY.*CENTE	l	v	15	o	m	v	10	o	TK	0.0000	-19.2512	-7.5821
STRE*VIBR*TY.*CENTE	l	v	15	o	m	v	15	c	TK	0.0000	-23.0168	-8.2565
STRE*VIBR*TY.*CENTE	m	n	10	c	m	n	10	o	TK	1.0000	-6.6278	9.0278
STRE*VIBR*TY.*CENTE	m	n	10	c	m	n	15	c	TK	1.0000	-6.3528	9.3028
STRE*VIBR*TY.*CENTE	m	n	10	c	m	v	10	c	TK	0.0382	1.8188	16.2588
STRE*VIBR*TY.*CENTE	m	n	10	c	m	v	10	o	TK	0.0457	0.1022	15.7578
STRE*VIBR*TY.*CENTE	m	n	10	c	m	v	15	c	TK	0.0476	3.3288	14.7488
STRE*VIBR*TY.*CENTE	m	n	10	o	m	n	15	c	TK	1.0000	-6.1164	6.6664
STRE*VIBR*TY.*CENTE	m	n	10	o	m	v	10	c	TK	0.2257	-1.8078	13.8478
STRE*VIBR*TY.*CENTE	m	n	10	o	m	v	10	o	TK	0.0348	0.3386	13.1214
STRE*VIBR*TY.*CENTE	m	n	10	o	m	v	15	c	TK	0.0063	3.3178	12.3378
STRE*VIBR*TY.*CENTE	m	n	15	c	m	v	10	c	TK	0.0076	2.0828	13.5728
STRE*VIBR*TY.*CENTE	m	n	15	c	m	v	10	o	TK	0.0467	0.0636	12.8464
STRE*VIBR*TY.*CENTE	m	n	15	c	m	v	15	c	TK	0.0002	3.5928	12.0628
STRE*VIBR*TY.*CENTE	m	v	10	c	m	v	10	o	TK	1.0000	-7.1178	8.5378
STRE*VIBR*TY.*CENTE	m	v	10	c	m	v	15	c	TK	1.0000	-10.5488	7.5288
STRE*VIBR*TY.*CENTE	m	v	10	o	m	v	15	c	TK	0.9977	-10.0478	5.6078

Data Analysis for Soil Liquefaction - Medium Dense

General Linear Models Procedure
Class Level Information

Class	Levels	Values
STRESS	3	h l m
VIBRATE	2	n v
TYPE	2	10 15
CENTER	2	c o

Number of observations in data set = 29

NOTE: Due to missing values, only 19 observations can be used in this analysis.

Data Analysis for Soil Liquefaction **(Medium Dense)**
General Linear Models Procedure
Dependent Variable: SOIL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	13	3493.23996228	268.71076633	107.33	0.0001
Error	5	12.51781667	2.50356333		
Corrected Total	18	3505.75777895			

R-Square	C.V.	Root	SOIL Mean
0.996429	4.418371	1.58226525	35.81105263

Source	DF	Type I SS	Mean Square	F Value	Pr > F
STRESS	2	2.93481077	1.46740538	0.59	0.5906
VIBRATE	1	1563.0906	563.09061	624.35	0.0001
STRESS*VIBRATE	2	1047.78010714	523.89005357	209.26	0.0001
TYPE	1	384.04466786	384.04466	153.40	0.0001
STRESS*TYPE	0	0.00000000	.	.	
VIBRATE*TYPE	0	0.00000000	.	.	
STRESS*VIBRATE*TYPE	0	0.00000000	.	.	
CENTER	1	22.81163915	22.81163915	9.11	0.0295
STRESS*CENTER	2	242.98395826	121.49197913	48.53	0.0005
VIBRATE*CENTER	1	35.19069187	35.19069187	14.06	0.0133
STRESS*VIBRAT*CENTER	2	29.76064454	14.88032227	5.94	0.0477
TYPE*CENTER	1	164.64282451	164.64282451	65.76	0.0005
STRESS*TYPE*CENTER	0	0.00000000	.	.	
VIBRATE*TYPE*CENTER	0	0.00000000	.	.	
STRE*VIBR*TYPE*CENTE	0	0.00000000	.	.	

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Source	DF	Type III SS	Mean Square	F Value	Pr > F
STRESS	2	243.95131410	121.97565705	48.72	0.0005
VIBRATE	1	321.70560108	321.70560108	128.50	0.0001
STRESS*VIBRATE	2	557.15451410	278.57725705	111.27	0.0001
TYPE	1	178.65000098	178.65000098	71.36	0.0004
STRESS*TYPE	0	0.00000000	.	.	
VIBRATE*TYPE	0	0.00000000	.	.	
STRESS*VIBRATE*TYPE	0	0.00000000	.	.	
CENTER	1	0.55296000	0.55296000	0.22	0.6582
STRESS*CENTER	2	74.17355641	37.08677821	14.81	0.0079
VIBRATE*CENTER	1	0.04046882	0.04046882	0.02	0.9038
STRESS*VIBRAT*CENTER	2	2.12223333	1.06111667	0.42	0.0060
TYPE*CENTER	1	164.64282451	164.64282451	65.76	0.0005
STRESS*TYPE*CENTER	0	0.00000000	.	.	
VIBRATE*TYPE*CENTER	0	0.00000000	.	.	
STRE*VIBR*TYPE*CENTE	0	0.000			

Data Analysis for Soil Liquefaction (Medium Dense)

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: SOIL
NOTE: This test controls the type I experimentwise error rate.
Alpha= 0.05 Confidence= 0.95 df= 5 MSE= 2.503563
Critical Value of Studentized Range= 4.602
Comparisons significant at the 0.05 level are indicated by '***'.

STRESS Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	
m - h	-3.1655	0.4750	4.1155	
m - l	-2.0363	0.9698	3.9758	
h - m	-4.1155	-0.4750	3.1655	
h - l	-2.5113	0.4948	3.5008	
l - m	-3.9758	-0.9698	2.0363	
l - h	-3.5008	-0.4948	2.5113	

VIBRATE Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	
n - v	16.2094	18.0993	19.9893	***
v - n	-19.9893	-18.0993	-16.2094	***

TYPE Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	
15 - 10	21.0354	23.5944	26.1534	***
10 - 15	-26.1534	-23.5944	-21.0354	***

CENTER Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
o - c	-0.8539	1.0360	2.9260
c - o	-2.9260	-1.0360	0.8539

Data Analysis for Soil Liquefaction (Medium Dense)

General Linear Models Procedure

Level of STRESS	Level of VIBRATE	N	SOIL Mean	SOIL SD
h	n	2	35.9050000	7.1064232
h	v	2	36.0900000	8.7256977
l	n	7	47.1271429	10.5519851
l	v	4	15.1600000	1.1491156
m	n	2	38.0250000	7.4458344
m	v	2	34.9200000	6.1518290

Level of STRESS	Level of TYPE	N	SOIL Mean	SOIL SD
h	10	4	35.9975000	6.4980324
l	10	8	27.9362500	13.7319158
l	15	3	55.6800000	11.7022434
m	10	4	36.4725000	5.8573736

Level of STRESS	Level of CENTER	N	SOIL Mean	SOIL SD
h	c	2	41.5950000	0.9404520
h	o	2	30.4000000	0.6788225
l	c	4	28.9850000	15.0431701
l	o	7	39.2271429	19.6947977
m	c	2	41.2800000	2.8425693
m	o	2	31.6650000	1.5485639

Level of VIBRATE	Level of TYPE	N	SOIL Mean	SOIL SD
n	10	8	38.8387500	4.6083819
n	15	3	55.6800000	11.7022434
v	10	8	25.3325000	11.6321669

Level of VIBRATE	Level of CENTER	N	SOIL Mean	SOIL SD
n	c	4	42.0575000	0.9826961
n	o	7	44.2171429	13.0805208
v	c	4	28.3650000	14.3784341
v	o	4	22.3000000	9.1899329

Level of TYPE	Level of CENTER	N	SOIL Mean	SOIL SD
10	c	7	34.2085714	12.5285267
10	o	9	30.4344444	10.1711407
15	c	1	42.2300000	.
15	o	2	62.4050000	1.5909903

Level of STRESS	Level of VIBRATE	Level of TYPE	N	SOIL Mean	SOIL SD
h	n	10	2	35.9050000	7.1064232
h	v	10	2	36.0900000	8.7256977
l	n	10	4	40.7125000	1.8381762
l	n	15	3	55.6800000	11.7022434
l	v	10	4	15.1600000	1.1491156
m	n	10	2	38.0250000	7.4458344
m	v	10	2	34.9200000	6.1518290

Level of STRESS	Level of VIBRATE	Level of CENTER	N	SOIL Mean	SOIL SD
h	n	c	1	40.9300000	.
h	n	o	1	30.8800000	.
h	v	c	1	42.2600000	.
h	v	o	1	29.9200000	.
l	n	c	2	42.0050000	0.3181981
l	n	o	5	49.1760000	12.1912194
l	v	c	2	15.9650000	0.8414571
l	v	o	2	14.3550000	0.8131728
m	n	c	1	43.2900000	.
m	n	o	1	32.7600000	.
m	v	c	1	39.2700000	.
m	v	o	1	30.5700000	.

Level of VIBRATE	Level of TYPE	Level of CENTER	SOIL N	SOIL Mean	SOIL SD
n	10	c	3	42.0000000	1.1952824
n	10	o	5	36.9420000	4.9455556
n	15	c	1	42.2300000	.
n	15	o	2	62.4050000	1.5909903
v	10	c	4	28.3650000	14.3784341
v	10	o	4	22.3000000	9.1899329

Level of STRESS	Level of VIBRATE	Level of TYPE	Level of CENTER	SOIL N	SOIL Mean	SOIL SD
h	n	10	c	1	40.9300000	.
h	n	10	o	1	30.8800000	.
h	v	10	c	1	42.2600000	.
h	v	10	o	1	29.9200000	.
l	n	10	c	1	41.7800000	.
l	n	10	o	3	40.3566667	2.07572477
l	n	15	c	1	42.2300000	.
l	n	15	o	2	62.4050000	1.59099026
l	v	10	c	2	15.9650000	0.84145707
l	v	10	o	2	14.3550000	0.81317280
m	n	10	c	1	43.2900000	.
m	n	10	o	1	32.7600000	.
m	v	10	c	1	39.2700000	.
m	v	10	o	1	30.5700000	.

Data Analysis for Soil Liquefaction (Medium Dense)

The MIXED Procedure

Class Level Information

Class	Levels	Values
STRESS	3	h l m
VIBRATE	2	n v
TYPE	2	10 15
CENTER	2	c o

Covariance Parameter Estimates (REML)

Cov Parm	Estimate
Residual	2.50356333

Model Fitting Information for SOIL

Description	Value
Observations	19.0000
Res Log Likelihood	-10.9780
Akaike's Information Criterion	-11.9780
Schwarz's Bayesian Criterion	-11.7827
-2 Res Log Likelihood	21.9560

Tests of Fixed Effects

Source	NDF	DDF	Type III F	Pr > F
STRESS	2	5	48.72	0.0005
VIBRATE	1	5	128.50	0.0001
STRESS*VIBRATE	2	5	111.27	0.0001
TYPE	1	5	71.36	0.0004
STRESS*TYPE	0	.	.	.
VIBRATE*TYPE	0	.	.	.
STRESS*VIBRATE*TYPE	0	.	.	.
CENTER	1	5	0.22	0.6582
STRESS*CENTER	2	5	14.81	0.0079
VIBRATE*CENTER	1	5	0.02	0.9038
STRESS*VIBRAT*CENTER	2	5	0.42	0.0060
TYPE*CENTER	1	5	65.76	0.0005
STRESS*TYPE*CENTER	0	.	.	.
VIBRATE*TYPE*CENTER	0	.	.	.
STRE*VIBR*TYPE*CENTE	0	.		

Data Analysis for Soil Liquefaction (Medium Dense)

Least Squares Means

Effect	STRESS	VIBRATE	TYPE	CENTER	LSMEAN	Std Error	DF	t	Pr > |t|	Alpha	Lower	Upper
STRESS	h				.	.	.	.	.	.	.	
STRESS	l				.	.	.	.	.	.	.	
STRESS	m				.	.	.	.	.	.	.	
VIBRATE		n			.	.	.	.	.	.	.	
VIBRATE		v			.	.	.	.	.	.	.	
TYPE			10		33.52805556	0.42385593	5	79.10	0.0001	0.05	32.4385	4.6176
TYPE			15		.	.	.	.	.	.	.	
CENTER				c	.	.	.	.	.	.	.	
CENTER				o	.	.	.	.	.	.	.	
STRESS*VIBRATE	h	n			.	.	.	.	.	.	.	
STRESS*VIBRATE	h	v			.	.	.	.	.	.	.	
STRESS*VIBRATE	l	n			46.69291667	0.66583732	5	70.13	0.0001	0.05	44.9813	8.4045
STRESS*VIBRATE	l	v			.	.	.	.	.	.	.	.
STRESS*VIBRATE	m	n			.	.	.	.	.	.	.	.
STRESS*VIBRATE	m	v			.	.	.	.	.	.	.	.
STRESS*TYPE	h		10		35.99750000	0.79113263	5	45.50	0.0001	0.05	33.9638	8.0312
STRESS*TYPE	l		10		28.11416667	0.60423752	5	46.53	0.0001	0.05	26.5609	9.6674
STRESS*TYPE	l		15		.	.	.	.	.	.	.	.
STRESS*TYPE	m		10		36.47250000	0.79113263	5	46.10	0.0001	0.05	34.4388	8.5062
STRESS*CENTER	h			c	.	.	.	.	.	.	.	.
STRESS*CENTER	h			o	.	.	.	.	.	.	.	.
STRESS*CENTER	l			c	.	.	.	.	.	.	.	.
STRESS*CENTER	l			o	.	.	.	.	.	.	.	.
STRESS*CENTER	m			c	.	.	.	.	.	.	.	.
STRESS*CENTER	m			o	.	.	.	.	.	.	.	.
VIBRATE*TYPE		n	10		38.33277778	0.60901418	5	62.94	0.0001	0.05	36.7673	9.8983
VIBRATE*TYPE		n	15		.	.	.	.	.	.	.	.
VIBRATE*TYPE		v	10		28.72333	0.58967544	5	48.71	0.0001	0.05	27.2075	30.2391
VIBRATE*CENTER		n		c	.	.	.	.	.	.	.	.
VIBRATE*CENTER		n		o	.	.	.	.	.	.	.	.
VIBRATE*CENTER		v		c	.	.	.	.	.	.	.	.
VIBRATE*CENTER		v		o	.	.	.	.	.	.	.	.
TYPE*CENTER			10	c	37.24916667	0.61845682	5	60.23	0.0001	0.05	35.659	38.8390
TYPE*CENTER			10	o	29.80694444	0.57976423	5	51.41	0.0001	0.05	28.316	31.2973
TYPE*CENTER			15	c	.	.	.	.	.	.	.	.
TYPE*CENTER			15	o	.	.	.	.	.	.	.	.
STRESS*VIBRATE*TYPE	h	n	10		35.90500000	1.11883049	5	32.09	0.0001	0.05	33.029	38.7810
STRESS*VIBRATE*TYPE	h	v	10		36.09000000	1.11883049	5	32.26	0.0001	0.05	33.214	38.9660
STRESS*VIBRATE*TYPE	l	n	10		41.06833333	0.91352127	5	44.96	0.0001	0.05	38.720	43.4166

Effect	STRESS	VIBRATE	TYPE	CENTER	LSMEAN	Std Error	DF	t	Pr > |t|	Alpha	Lower	Upper
STRESS*VIBRATE*TYPE	l	n	15		52.31750000	0.96893563	5	53.99	0.0001	0.05	49.826	54.8082
STRESS*VIBRATE*TYPE	l	v	10		15.16000000	0.79113263	5	19.16	0.0001	0.05	13.126	17.1937
STRESS*VIBRATE*TYPE	m	n	10		38.02500000	1.11883049	5	33.99	0.0001	0.05	35.149	40.9010
STRESS*VIBRATE*TYPE	m	v	10		34.92000000	1.11883049	5	31.21	0.0001	0.05	32.044	37.7960
STRESS*VIBRAT*CENTER	h	n		c	.	.	.	.	.	.	.	.
STRESS*VIBRAT*CENTER	h	n		o	.	.	.	.	.	.	.	.
STRESS*VIBRAT*CENTER	h	v		c	.	.	.	.	.	.	.	.
STRESS*VIBRAT*CENTER	h	v		o	.	.	.	.	.	.	.	.
STRESS*VIBRAT*CENTER	l	n		c	42.00500000	1.11883049	5	37.54	0.0001	0.05	39.129	44.8810
STRESS*VIBRAT*CENTER	l	n		o	51.38083333	0.72220198	5	71.14	0.0001	0.05	49.524	53.2373
STRESS*VIBRAT*CENTER	l	v		c	.	.	.	.	.	.	.	.
STRESS*VIBRAT*CENTER	l	v		o	.	.	.	.	.	.	.	.
STRESS*VIBRAT*CENTER	m	n		c	.	.	.	.	.	.	.	.
STRESS*VIBRAT*CENTER	m	n		o	.	.	.	.	.	.	.	.
STRESS*VIBRAT*CENTER	m	v		c	.	.	.	.	.	.	.	.
STRESS*VIBRAT*CENTER	m	v		o	.	.	.	.	.	.	.	.
VIBRATE*TYPE*CENTER		n	10	c	42.00000000	0.91352127	5	45.98	0.0001	0.05	39.651	44.3483
VIBRATE*TYPE*CENTER		n	10	o	34.66555556	0.80565003	5	43.03	0.0001	0.05	32.594	36.7365
VIBRATE*TYPE*CENTER		n	15	c	.	.	.	.	.	.	.	.
VIBRATE*TYPE*CENTER		n	15	o	.	.	.	.	.	.	.	.
VIBRATE*TYPE*CENTER		v	10	c	32.49833333	0.83392701	5	38.97	0.0001	0.05	30.354	34.6420
VIBRATE*TYPE*CENTER		v	10	o	24.94833333	0.83392701	5	29.92	0.0001	0.05	22.804	27.0920
STRE*VIBR*TYPE*CENTE	h	n	10	c	40.93000000	1.58226525	5	25.87	0.0001	0.05	36.862	44.9973
STRE*VIBR*TYPE*CENTE	h	n	10	o	30.88000000	1.58226525	5	19.52	0.0001	0.05	26.812	34.9473
STRE*VIBR*TYPE*CENTE	h	v	10	c	42.26000000	1.58226525	5	26.71	0.0001	0.05	38.192	46.3273
STRE*VIBR*TYPE*CENTE	h	v	10	o	29.92000000	1.58226525	5	18.91	0.0001	0.05	25.852	33.9873
STRE*VIBR*TYPE*CENTE	l	n	10	c	41.78000000	1.58226525	5	26.41	0.0001	0.05	37.712	45.8473
STRE*VIBR*TYPE*CENTE	l	n	10	o	40.35666667	0.91352127	5	44.18	0.0001	0.05	38.008	42.7049
STRE*VIBR*TYPE*CENTE	l	n	15	c	42.23000000	1.58226525	5	26.69	0.0001	0.05	38.162	46.2973
STRE*VIBR*TYPE*CENTE	l	n	15	o	62.40500000	1.11883049	5	55.78	0.0001	0.05	59.529	65.2810
STRE*VIBR*TYPE*CENTE	l	v	10	c	15.96500000	1.11883049	5	14.27	0.0001	0.05	13.089	18.8410
STRE*VIBR*TYPE*CENTE	l	v	10	o	14.35500000	1.11883049	5	12.83	0.0001	0.05	11.479	17.2310
STRE*VIBR*TYPE*CENTE	m	n	10	c	43.29000000	1.58226525	5	27.36	0.0001	0.05	39.222	47.3573
STRE*VIBR*TYPE*CENTE	m	n	10	o	32.76000000	1.58226525	5	20.70	0.0001	0.05	28.692	36.8273
STRE*VIBR*TYPE*CENTE	m	v	10	c	39.27000000	1.58226525	5	24.82	0.0001	0.05	35.202	43.3373
STRE*VIBR*TYPE*CENTE	m	v	10	o	30.57000000	1.58226525	5	19.32	0.0001	0.05	26.502	34.6373

Data Analysis for Soil Liquefaction (Medium Dense)

Differences of Least Squares Means

Effect	STR	VIB	TYP	CEN	_STR	_VIB	_TYP	_CEN	Adjustment	Adj P	Adj Low	Adj Upp
STR	h				l							
STR	h				m							
STR	l				m							
VIB		n				v						
TYP			10				15					
CEN				c				o				
STR*VIB	h	n			h	v						
STR*VIB	h	n			l	n						
STR*VIB	h	n			l	v						
STR*VIB	h	n			m	n						
STR*VIB	h	n			m	v						
STR*VIB	h	v			l	n						
STR*VIB	h	v			l	v						
STR*VIB	h	v			m	n						
STR*VIB	h	v			m	v						
STR*VIB	l	n			l	v						
STR*VIB	l	n			m	n						
STR*VIB	l	n			m	v						
STR*VIB	l	v			m	n						
STR*VIB	l	v			m	v						
STR*VIB	m	n			m	v						
STR*TYP	h		10		l		10		TK	0.0012	4.6442	11.1225
STR*TYP	h		10		l		15					
STR*TYP	h		10		m		10		TK	0.9072	-4.1155	3.1655
STR*TYP	l		10		l		15					
STR*TYP	l		10		m		10		TK	0.0009	-11.5975	-5.1192
STR*TYP	l		15		m		10					
STR*CEN	h			c	h			o				
STR*CEN	h			c	l			c				
STR*CEN	h			c	l			o				
STR*CEN	h			c	m			c				
STR*CEN	h			c	m			o				
STR*CEN	h			o	l			c				
STR*CEN	h			o	l			o				
STR*CEN	h			o	m			c				
STR*CEN	h			o	m			o				
STR*CEN	l			c	l			o				
STR*CEN	l			c	m			c				
STR*CEN	l			c	m			o				

Effect	STR	VIB	TYP	CEN	_STR	_VIB	_TYP	_CEN	Adjustment	Adj P	Adj Low	Adj Upp
STR*CEN	l			o	m			c		.	.	.
STR*CEN	l			o	m			o		.	.	.
STR*CEN	m			c	m			o		.	.	.
VIB*TYP		n	10			n	15			.	.	.
VIB*TYP		n	10			v	10		TK	0.0001	7.4303	11.7886
VIB*TYP		n	15			v	10			.	.	.
VIB*CEN		n		c		n		o		.	.	.
VIB*CEN		n		c		v		c		.	.	.
VIB*CEN		n		c		v		o		.	.	.
VIB*CEN		n		o		v		c		.	.	.
VIB*CEN		n		o		v		o		.	.	.
VIB*CEN		v		c		v		o		.	.	.
TYP*CEN			10	c			10		TK	0.0003	5.2631	9.6213
TYP*CEN			10	c			15	c		.	.	.
TYP*CEN			10	c			15	o		.	.	.
TYP*CEN			10	o			15	c		.	.	.
TYP*CEN			10	o			15	o		.	.	.
TYP*CEN			15	c			15	o		.	.	.
STR*VIB*TYP	h	n	10		h	v	10		TK	1.0000	7.2671	6.8971
STR*VIB*TYP	h	n	10		l	n			TK	0.2929	-11.6284	1.3017
STR*VIB*TYP	h	n	10		l	n			TK	0.0009	-23.0372	-9.7878
STR*VIB*TYP	h	n	10		l	v			TK	0.0002	14.6117	26.8783
STR*VIB*TYP	h	n	10		m	n			TK	0.8122	-9.2021	4.9621
STR*VIB*TYP	h	n	10		m	v			TK	0.9925	-6.0971	8.0671
STR*VIB*TYP	h	v	10		l	n	10		TK	0.1275	-11.4434	1.4867
STR*VIB*TYP	h	v	10		l	n	15		TK	0.0010	-22.8522	-9.6028
STR*VIB*TYP	h	v	10		l	v	10		TK	0.0002	14.7967	27.0633
STR*VIB*TYP	h	v	10		m	n			TK	0.8604	-9.0171	5.1471
STR*VIB*TYP	h	v	10		m	v			TK	0.9825	-5.9121	8.2521
STR*VIB*TYP	l	n	10		l	n			TK	0.0033	-17.2096	-5.2887
STR*VIB*TYP	l	n	10		l	v			TK	0.0000	20.4993	31.3174
STR*VIB*TYP	l	n	10		m	n			TK	0.4591	-3.4217	9.5084
STR*VIB*TYP	l	n	10		m	v			TK	0.0605	-0.3167	12.6134
STR*VIB*TYP	l	n	15		l	v			TK	0.0000	31.5586	42.7564
STR*VIB*TYP	l	n	15		m	n			TK	0.0017	7.6678	20.9172
STR*VIB*TYP	l	n	15		m	v			TK	0.0007	10.7728	24.0222
STR*VIB*TYP	l	v	10		m	n			TK	0.0001	-28.9983	-16.7317
STR*VIB*TYP	l	v	10		m	v			TK	0.0003	-25.8933	-13.6267
STR*VIB*TYP	m	n	10		m	v	10		TK	0.5209	-3.9771	10.1871
STR*VIBRAT*CEN	h	n		c	h	n		o		.	.	.
STR*VIBRAT*CEN	h	n		c	h	v		c		.	.	.
STR*VIBRAT*CEN	h	n		c	h	v		o		.	.	.
STR*VIBRAT*CEN	h	n		c	l	n		c		.	.	.
STR*VIBRAT*CEN	h	n		c	l	n		o		.	.	.

Effect		STR	VIB	TYP	CEN	_STR	_VIB	_TYP	_CEN	Adjustment	Adj P	Adj Low	Adj Upp
STR*VIBRAT*CEN	h	n		c		l	v		c		.	.	.
STR*VIBRAT*CEN	h	n		c		l	v		o		.	.	.
STR*VIBRAT*CEN	h	n		c		m	n		c		.	.	.
STR*VIBRAT*CEN	h	n		c		m	n		o		.	.	.
STR*VIBRAT*CEN	h	n		c		m	v		c		.	.	.
STR*VIBRAT*CEN	h	n		c		m	v		o		.	.	.
STR*VIBRAT*CEN	h	n		o		h	v		c		.	.	.
STR*VIBRAT*CEN	h	n		o		h	v		o		.	.	.
STR*VIBRAT*CEN	h	n		o		l	n		c		.	.	.
STR*VIBRAT*CEN	h	n		o		l	n		o		.	.	.
STR*VIBRAT*CEN	h	n		o		l	v		c		.	.	.
STR*VIBRAT*CEN	h	n		o		l	v		o		.	.	.
STR*VIBRAT*CEN	h	n		o		m	n		c		.	.	.
STR*VIBRAT*CEN	h	n		o		m	n		o		.	.	.
STR*VIBRAT*CEN	h	n		o		m	v		c		.	.	.
STR*VIBRAT*CEN	h	n		o		m	v		o		.	.	.
STR*VIBRAT*CEN	h	v		c		h	v		o		.	.	.
STR*VIBRAT*CEN	h	v		c		l	n		c		.	.	.
STR*VIBRAT*CEN	h	v		c		l	n		o		.	.	.
STR*VIBRAT*CEN	h	v		c		l	v		c		.	.	.
STR*VIBRAT*CEN	h	v		c		l	v		o		.	.	.
STR*VIBRAT*CEN	h	v		c		m	n		c		.	.	.
STR*VIBRAT*CEN	h	v		c		m	n		o		.	.	.
STR*VIBRAT*CEN	h	v		c		m	v		c		.	.	.
STR*VIBRAT*CEN	h	v		c		m	v		o		.	.	.
STR*VIBRAT*CEN	h	v		o		l	n		c		.	.	.
STR*VIBRAT*CEN	h	v		o		l	n		o		.	.	.
STR*VIBRAT*CEN	h	v		o		l	v		c		.	.	.
STR*VIBRAT*CEN	h	v		o		l	v		o		.	.	.
STR*VIBRAT*CEN	h	v		o		m	n		c		.	.	.
STR*VIBRAT*CEN	h	v		o		m	n		o		.	.	.
STR*VIBRAT*CEN	h	v		o		m	v		c		.	.	.
STR*VIBRAT*CEN	h	v		o		m	v		o		.	.	.
STR*VIBRAT*CEN	l	n		c		l	n				TK	0.0009	-12.7990	-5.9527
STR*VIBRAT*CEN	l	n		c		l	v		c		.	.	.
STR*VIBRAT*CEN	l	n		c		l	v		o		.	.	.
STR*VIBRAT*CEN	l	n		c		m	n		c		.	.	.
STR*VIBRAT*CEN	l	n		c		m	n		o		.	.	.
STR*VIBRAT*CEN	l	n		c		m	v		c		.	.	.
STR*VIBRAT*CEN	l	n		c		m	v		o		.	.	.
STR*VIBRAT*CEN	l	n		o		l	v		c		.	.	.
STR*VIBRAT*CEN	l	n		o		l	v		o		.	.	.
STR*VIBRAT*CEN	l	n		o		m	n		c		.	.	.

Effect	STR	VIB	TYP	CEN	_STR	_VIB	_TYP	_CEN	Adjustment	Adj P	Adj Low	Adj Upp
STR*VIBRAT*CEN	l	n		o	m	n		o		.	.	.
STR*VIBRAT*CEN	l	n		o	m	v		c		.	.	.
STR*VIBRAT*CEN	l	n		o	m	v		o		.	.	.
STR*VIBRAT*CEN	l	v		c	l	v		o		.	.	.
STR*VIBRAT*CEN	l	v		c	m	n		c		.	.	.
STR*VIBRAT*CEN	l	v		c	m	n		o		.	.	.
STR*VIBRAT*CEN	l	v		c	m	v		c		.	.	.. .
STR*VIBRAT*CEN	l	v		c	m	v		o		.	.	.
STR*VIBRAT*CEN	l	v		o	m	n		c		.	.	.
STR*VIBRAT*CEN	l	v		o	m	n		o		.	.	.
STR*VIBRAT*CEN	l	v		o	m	v		c		.	.	.
STR*VIBRAT*CEN	l	v		o	m	v		o		.	.	.
STR*VIBRAT*CEN	m	n		c	m	n		o		.	.	.
STR*VIBRAT*CEN	m	n		c	m	v		c		.	.	.
STR*VIBRAT*CEN	m	n		c	m	v		o		.	.	.
STR*VIBRAT*CEN	m	n		o	m	v		c		.	.	.
STR*VIBRAT*CEN	m	n		o	m	v		o		.	.	.
STR*VIBRAT*CEN	m	v		c	m	v		o		.	.	.
VIB*TYP*CEN		n	10	c		n	10		TK	0.0068	2.8399	11.8290
VIB*TYP*CEN		n	10	c		n	15	c		.	.	.
VIB*TYP*CEN		n	10	c		n	15	o		.	.	.
VIB*TYP*CEN		n	10	c		v	10		TK	0.0023	4.9374	14.0659
VIB*TYP*CEN		n	10	c		v	10		TK	0.0001	12.4874	21.6159
VIB*TYP*CEN		n	10	o		n	15	c		.	.	.
VIB*TYP*CEN		n	10	o		n	15	o		.	.	.
VIB*TYP*CEN		n	10	o		v	10		TK	0.3453	-2.1115	6.4459
VIB*TYP*CEN		n	10	o		v	10	o	TK	0.0015	5.4385	13.9959
VIB*TYP*CEN		n	15	c		n	15	o		.	.	.
VIB*TYP*CEN		n	15	c		v	10	c		.	.	.
VIB*TYP*CEN		n	15	c		v	10	o		.	.	.
VIB*TYP*CEN		n	15	o		v	10	c		.	.	.
VIB*TYP*CEN		n	15	o		v	10	o		.	.	.
VIB*TYP*CEN		v	10	c		v	10		TK	0.0052	3.1982	11.9018
STRE*VIBR*TYP*CENTE	h	n	10	c	h	n	10	o	TK	0.0091	1.9682	22.0682
STRE*VIBR*TYP*CENTE	h	n	10	c	h	v	10	c	TK	1.0000	-13.3482	10.6882
STRE*VIBR*TYP*CENTE	h	n	10	c	h	v	10	o	TK	0.0505	1.0082	23.0282
STRE*VIBR*TYP*CENTE	h	n	10	c	l	n	10	c	TK	1.0000	-12.8682	11.1682
STRE*VIBR*TYP*CENTE	h	n	10	c	l	n	10	o	TK	1.0000	-9.2395	10.3862
STRE*VIBR*TYP*CENTE	h	n	10	c	l	n	15	c	TK	1.0000	-13.3182	10.7182
STRE*VIBR*TYP*CENTE	h	n	10	c	l	n	15	o	TK	0.0020	-31.8831	-11.0669
STRE*VIBR*TYP*CENTE	h	n	10	c	l	v	10	c	TK	0.0010	14.5569	35.3731
STRE*VIBR*TYP*CENTE	h	n	10	c	l	v	10	o	TK	0.0007	16.1669	36.9831
STRE*VIBR*TYP*CENTE	h	n	10	c	m	n	10	c	TK	0.9910	-14.3782	9.6582
STRE*VIBR*TYP*CENTE	h	n	10	c	m	n	10	o	TK	0.0599	3.8482	20.1882

Effect	STR	VIB	TYP	CEN	_STR	_VIB	_TYP	_CEN	Adjustment		Adj P	Adj Low	Adj Upp
STRE*VIBR*TYP*CENTE	h n	10	c	m	v	10	c			TK	0.9995	-10.3582	13.6782
STRE*VIBR*TYP*CENTE	h n	10	c	m	v	10	o			TK	0.0486	1.6582	22.3782
STRE*VIBR*TYP*CENTE	h n	10	o	h	v	10	c			TK	0.0420	-23.3982	-0.6382
STRE*VIBR*TYP*CENTE	h n	10	o	h	v	10	o			TK	1.0000	-11.0582	12.9782
STRE*VIBR*TYP*CENTE	h n	10	o	l	n	10	c			TK	0.0532	-22.9182	-1.1182
STRE*VIBR*TYP*CENTE	h n	10	o	l	n	10	o			TK	0.0374	-19.2895	-0.3362
STRE*VIBR*TYP*CENTE	h n	10	o	l	n	15	c			TK	0.0627	-23.3682	0.6682
STRE*VIBR*TYP*CENTE	h n	10	o	l	n	15	o			TK	0.0003	-41.9331	-21.1169
STRE*VIBR*TYP*CENTE	h n	10	o	l	v	10	c			TK	0.0108	4.5069	25.3231
STRE*VIBR*TYP*CENTE	h n	10	o	l	v	10	o			TK	0.0068	6.1169	26.9331
STRE*VIBR*TYP*CENTE	h n	10	o	m	n	10	c			TK	0.0440	-24.4282	-0.3918
STRE*VIBR*TYP*CENTE	h n	10	o	m	n	10	o			TK	0.9986	-13.8982	10.1382
STRE*VIBR*TYP*CENTE	h n	10	o	m	v	10	c			TK	0.0538	0.08082	3.6282
STRE*VIBR*TYP*CENTE	h n	10	o	m	v	10	o			TK	1.0000	-11.7082	12.3282
STRE*VIBR*TYP*CENTE	h v	10	c	h	v	10	o			TK	0.0450	0.3218	24.3582
STRE*VIBR*TYP*CENTE	h v	10	c	l	n	10	c			TK	1.0000	-11.5382	12.4982
STRE*VIBR*TYP*CENTE	h v	10	c	l	n	10	o			TK	0.9918	-7.9095	11.7162
STRE*VIBR*TYP*CENTE	h v	10	c	l	n	15	c			TK	1.0000	-11.9882	12.0482
STRE*VIBR*TYP*CENTE	h v	10	c	l	n	15	o			TK	0.0027	-30.5531	-9.7369
STRE*VIBR*TYP*CENTE	h v	10	c	l	v	10	c			TK	0.0008	15.8869	36.7031
STRE*VIBR*TYP*CENTE	h v	10	c	l	v	10	o			TK	0.0006	17.4969	38.3131
STRE*VIBR*TYP*CENTE	h v	10	c	m	n	10	c			TK	1.0000	-13.0482	10.9882
STRE*VIBR*TYP*CENTE	h v	10	c	m	n	10	o			TK	0.0512	2.5182	21.5182
STRE*VIBR*TYP*CENTE	h v	10	c	m	v	10	c			TK	0.9569	-9.0282	15.0082
STRE*VIBR*TYP*CENTE	h v	10	c	m	v	10	o			TK	0.0558	-0.3282	23.7082
STRE*VIBR*TYP*CENTE	h v	10	o	l	n	10	c			TK	0.0527	-23.8782	0.1582
STRE*VIBR*TYP*CENTE	h v	10	o	l	n	10	o			TK	0.0390	-20.2495	-0.6238
STRE*VIBR*TYP*CENTE	h v	10	o	l	n	15	c			TK	0.0454	-24.3282	-0.2918
STRE*VIBR*TYP*CENTE	h v	10	o	l	n	15	o			TK	0.0003	-42.8931	-22.0769
STRE*VIBR*TYP*CENTE	h v	10	o	l	v	10	c			TK	0.0145	3.5469	24.3631
STRE*VIBR*TYP*CENTE	h v	10	o	l	v	10	o			TK	0.0089	5.1569	25.9731
STRE*VIBR*TYP*CENTE	h v	10	o	m	n	10	c			TK	0.0324	-25.3882	-1.3518
STRE*VIBR*TYP*CENTE	h v	10	o	m	n	10	o			TK	0.9683	-14.8582	9.1782
STRE*VIBR*TYP*CENTE	h v	10	o	m	v	10	c			TK	0.1281	-21.3682	2.6682
STRE*VIBR*TYP*CENTE	h v	10	o	m	v	10	o			TK	1.0000	-12.6682	11.3682
STRE*VIBR*TYP*CENTE	l n	10	c	l	n	10	o			TK	0.9993	-8.3895	11.2362
STRE*VIBR*TYP*CENTE	l n	10	c	l	n	15	c			TK	1.0000	-12.4682	11.5682
STRE*VIBR*TYP*CENTE	l n	10	c	l	n	15	o			TK	0.0024	-31.0331	-10.2169
STRE*VIBR*TYP*CENTE	l n	10	c	l	v	10	c			TK	0.0008	015.4069	36.2231
STRE*VIBR*TYP*CENTE	l n	10	c	l	v	10	o			K	0.0006	17.0169	37.8331
STRE*VIBR*TYP*CENTE	l n	10	c	m	n	10	c			TK	0.9998	-13.5282	10.5082
STRE*VIBR*TYP*CENTE	l n	10	c	m	n	10	o			TK	0.0449	2.9982	21.0382
STRE*VIBR*TYP*CENTE	l n	10	c	m	v	10	c			TK	0.9860	-9.5082	14.5282
STRE*VIBR*TYP*CENTE	l n	10	c	m	v	10	o			TK	0.0423	0.8082	23.2282

Effect	STR	VIB	TYP	CEN	_STR	_VIB	_TYP	_CEN	Adjustment		Adj P	Adj Low	Adj Upp
STRE*VIBR*TYP*CENTE	l n	10	o	l	n	15	c			TK	0.9927	-11.6862	7.9395
STRE*VIBR*TYP*CENTE	l n	10	o	l	n	15	o			TK	0.0004	-29.8061	-14.2906
STRE*VIBR*TYP*CENTE	l n	10	o	l	v	10	c			K	0.0003	16.6339	32.1494
STRE*VIBR*TYP*CENTE	l n	10	o	l	v	10	o			K	0.0002	18.2439	33.7594
STRE*VIBR*TYP*CENTE	l n	10	o	m	n	10	c			TK	0.8875	-12.7462	6.8795
STRE*VIBR*TYP*CENTE	l n	10	o	m	n	10	o			TK	0.0303	2.2162	17.4095
STRE*VIBR*TYP*CENTE	l n	10	o	m	v	10	c			TK	1.0000	-8.7262	10.8995
STRE*VIBR*TYP*CENTE	l n	10	o	m	v	10	o			TK	0.0505	-0.0262	19.5995
STRE*VIBR*TYP*CENTE	l n	15	c	l	n	15	o			TK	0.0027	-30.5831	-9.7669
STRE*VIBR*TYP*CENTE	l n	15	c	l	v	10	c			TK	0.0008	15.8569	36.6731
STRE*VIBR*TYP*CENTE	l n	15	c	l	v	10	o			TK	0.0006	17.4669	38.2831
STRE*VIBR*TYP*CENTE	l n	15	c	m	n	10	c			TK	1.0000	-13.0782	10.9582
STRE*VIBR*TYP*CENTE	l n	15	c	m	n	10	o			TK	0.0528	2.5482	21.4882
STRE*VIBR*TYP*CENTE	l n	15	c	m	v	10	c			TK	0.9593	-9.0582	14.9782
STRE*VIBR*TYP*CENTE	l n	15	c	m	v	10	o			TK	0.0464	0.3582	23.6782
STRE*VIBR*TYP*CENTE	l n	15	o	l	v	10	c			TK	0.0000	37.9418	54.9382
STRE*VIBR*TYP*CENTE	l n	15	o	l	v	10	o			K	0.0000	39.5518	56.5482
STRE*VIBR*TYP*CENTE	l n	15	o	m	n	10	c			K	0.0035	8.7069	29.5231
STRE*VIBR*TYP*CENTE	l n	15	o	m	n	10	o			TK	0.0004	19.2369	40.0531
STRE*VIBR*TYP*CENTE	l n	15	o	m	v	10	c			TK	0.0014	12.7269	33.5431
STRE*VIBR*TYP*CENTE	l n	15	o	m	v	10	o			TK	0.0003	21.4269	42.2431
STRE*VIBR*TYP*CENTE	l v	10	c	l	v	10	o			TK	0.9932	-6.8882	10.1082
STRE*VIBR*TYP*CENTE	l v	10	c	m	n	10	c			TK	0.0006	-37.7331	-16.9169
STRE*VIBR*TYP*CENTE	l v	10	c	m	n	10	o			TK	0.0063	-27.2031	-6.3869
STRE*VIBR*TYP*CENTE	l v	10	c	m	v	10	c			TK	0.0014	-33.7131	-12.8969
STRE*VIBR*TYP*CENTE	l v	10	c	m	v	10	o			TK	0.0119	-25.0131	-4.1969
STRE*VIBR*TYP*CENTE	l v	10	o	m	n	10	c			TK	0.0005	-39.3431	-18.5269
STRE*VIBR*TYP*CENTE	l v	10	o	m	n	10	o			TK	0.0041	-28.8131	-7.9969
STRE*VIBR*TYP*CENTE	l v	10	o	m	v	10	c			TK	0.0010	-35.3231	-14.5069
STRE*VIBR*TYP*CENTE	l v	10	o	m	v	10	o			TK	0.0074	-26.6231	-5.8069
STRE*VIBR*TYP*CENTE	m n	10	c	m	n	10	o			TK	0.0534	1.4882	22.5482
STRE*VIBR*TYP*CENTE	m n	10	c	m	v	10	c			TK	0.8187	-7.9982	16.0382
STRE*VIBR*TYP*CENTE	m n	10	c	m	v	10	o			TK	0.0398	0.7018	24.7382
STRE*VIBR*TYP*CENTE	m n	10	o	m	v	10	c			TK	0.0234	0.5282	5.5082
STRE*VIBR*TYP*CENTE	m n	10	o	m	v	10	o			TK	0.9949	-9.8282	14.2082
STRE*VIBR*TYP*CENTE	m v	10	c	m	v	10	o			TK	0.0234	3.3182	20.7182