

SRV ENVELOPE
REQUIRED RESPONSE SPECTRA (RRS)
FOR THE REACTOR BUILDING

RIVER BEND STATION - UNIT 1
GULF STATES UTILITIES COMPANY
WEST FELICIANA PARISH, LOUISIANA

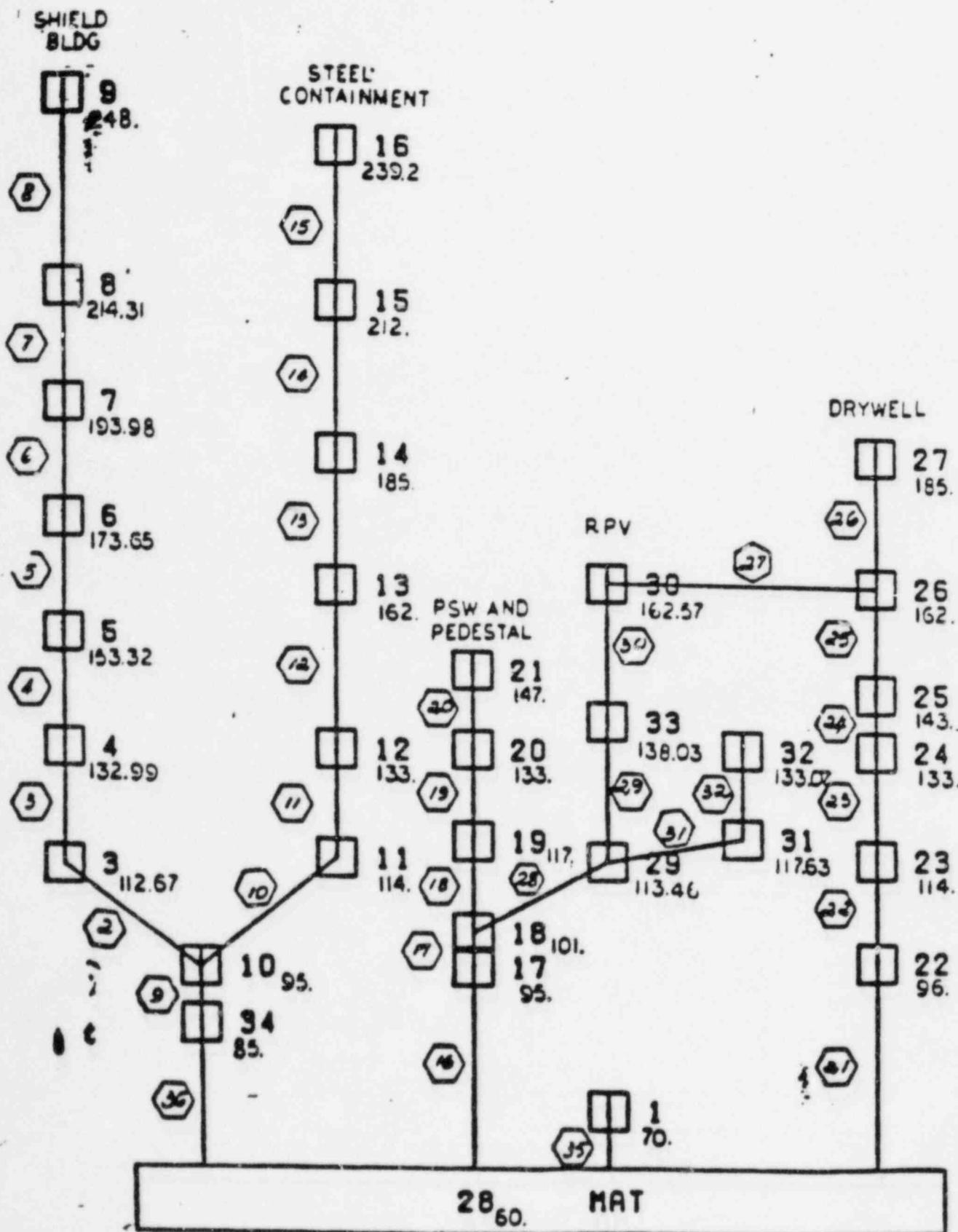
STONE & WEBSTER ENGINEERING CORPORATION
CHERRY HILL OPERATIONS CENTER
CHERRY HILL, NEW JERSEY

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REQUIRED RESPONSE SPECTRA (RRS)

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None - Weir Wall	91.25	134

*Each reference number includes SRV envelope for horizontal and vertical direction at 2 percent damping.

G.S.U - R.B.1 - J.O 12210 CALC 201.130.124 - A.K.LE
 SEISMIC ANALYSIS OF REACTOR BUILDING W/CONCRETE FIX



REF 102

7 MAR 1955
119-79

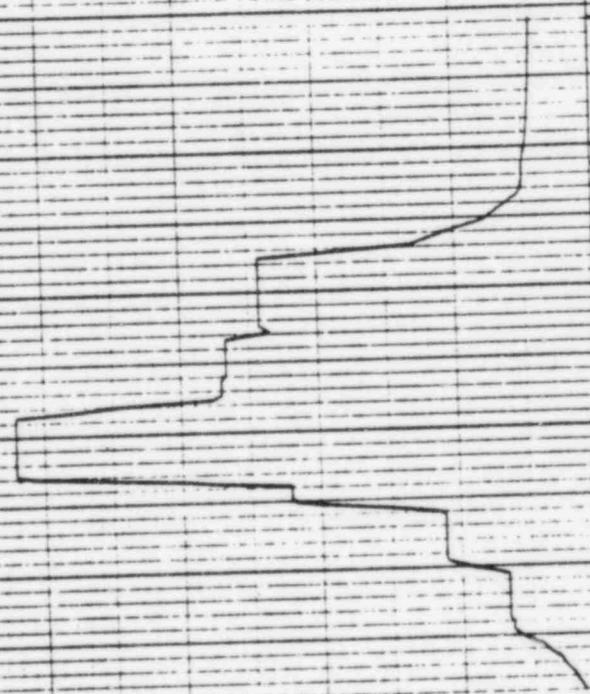
SRV
PEPECRA VER DN LEV DB
GULF STATES UTILITIES-RBS UNIT 1-CALCIPRID-NM17-SQE-1903 REV113
RMS OF ACC.-REACTOR BLDG.-EL-60.000, MASS-28 SEIS MODEL - MAY
PEAK SPREAD: 4-15Z
DISK CURVE SET NO. 27

DAMPING VALUE = 0.020

FOR DIRECTION

ACCELERATION G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ
10⁰
2 3 4 5 6 7 8 9 10¹
2 3 4 5 6 7 8 9 10²
2 3 4 5 6 7 8 9 10³



1344

REF 102

117.7

7 MAR 1983

DAMPING VALUE = 0.020

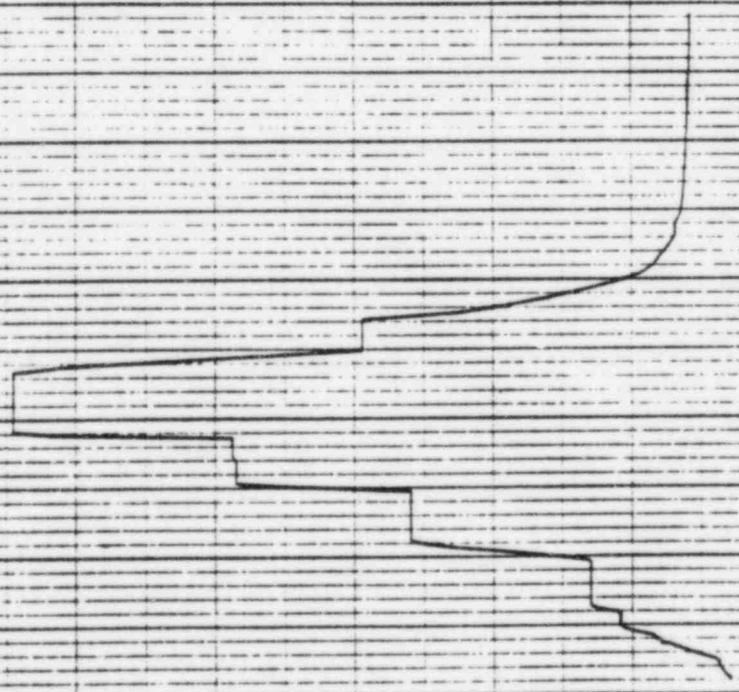
PSPECTRA VER. 01 LEV. 08
DULF STATES UTILITIES-RBS UNIT 1-CALC1221D-NM(C)-5DE-1903 REV11
RRS OF ACC.-REACTOR BLDG.-EL-50.DDD, MASS:2B 5E16 MODEL - MAT
PEAK SPREAD +-15%
DISK CURVE SET NO.27

SRV

VER DIRECTION

ACCELERATION G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ
10⁰ 2 3 4 5 6 7 8 9 10¹



7 MAR 1968

Y/A-H

SRY

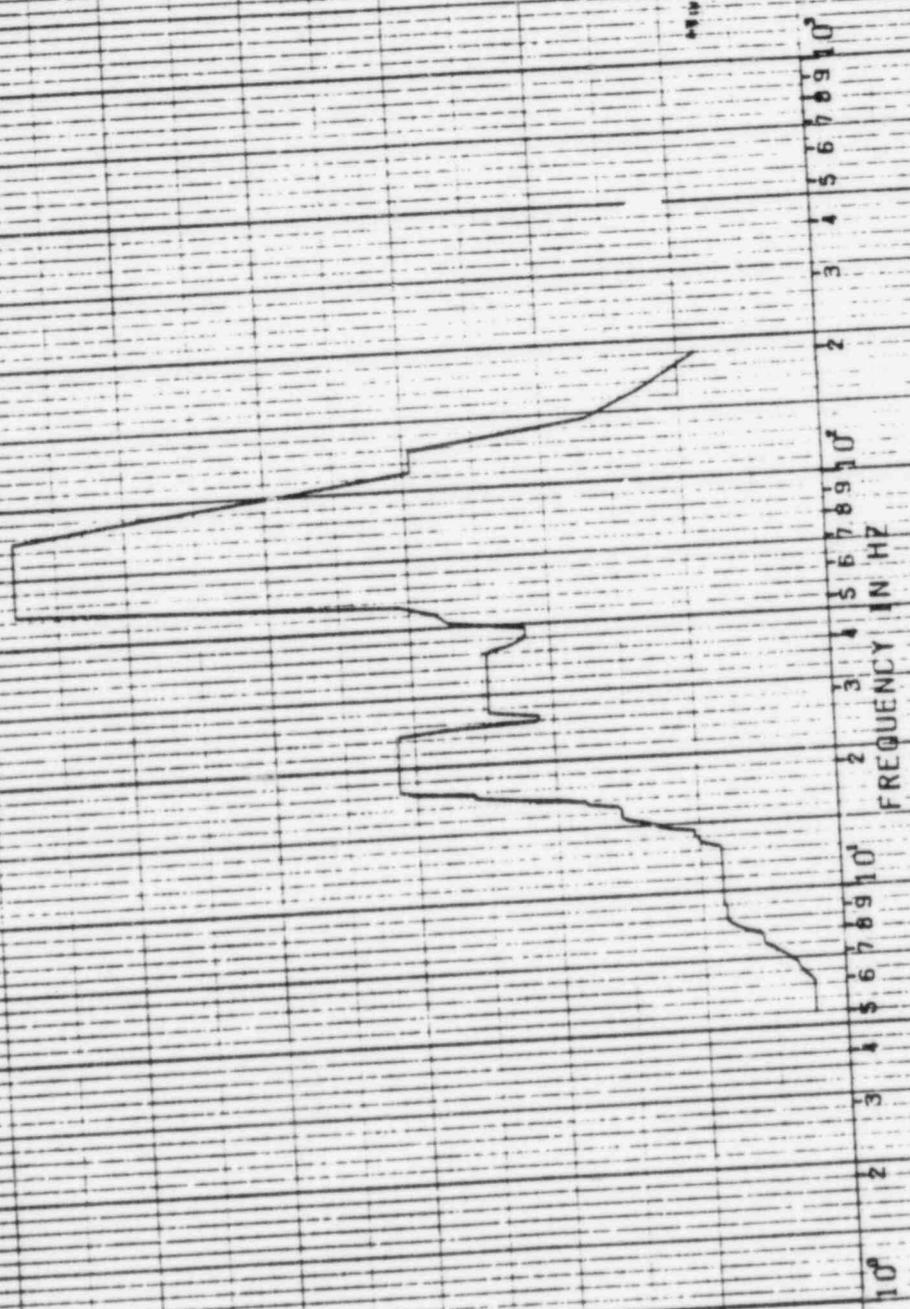
SPECTRA VER DB LEV DB
 GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM C1-60E-1803 REV(1)
 RRS OF ACC. REACTOR BLDG., ELE-70.000, MASS-01 SEIS MODEL-TOP OF MAT
 PEAK SPREAD: 4-15Z.
 D16X CURVE SET NO. 1

HDR DIRECTION

DAMPING VALUE = 0.020

ACCELERATION G

1.40 1.00 0.80 0.60 0.40 0.20 0.00



FREQUENCY IN HZ

REF 103

11-2-54

7 MAR 1955

PSPECTRA VER 01 LEV 08
GULF STATES UTILITIES-RBS UNIT 1-CALC 12210-NM1C7-50E-1908-REV 117
RMS OF ACC-REACTOR BLDG., EL-70.000, MASS-01 SEIS MODEL-TOP OF MAT
PERL SP'RD 1-15Z

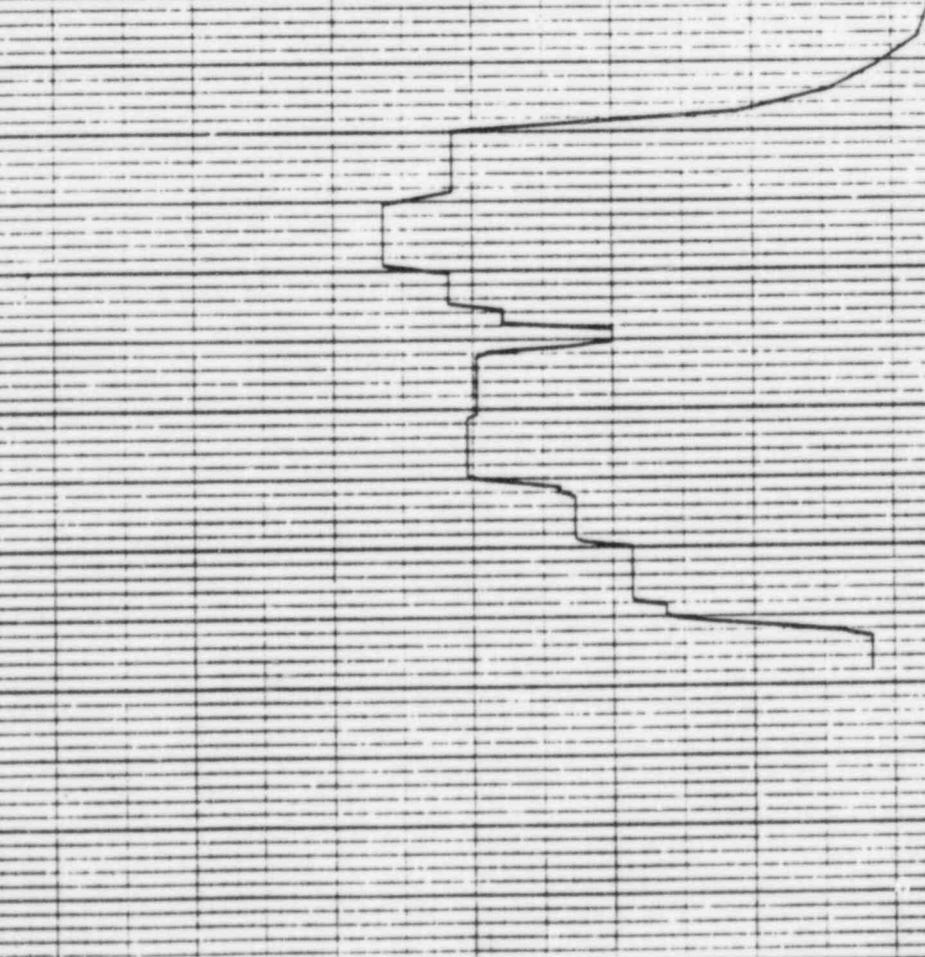
DISK CURVE SET NO. 1

VER. DIRECTION

DAMPING VALUE = 0.020

ACCELERATION - G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ
10⁰ 2 3 4 5 6 7 8 9 10¹



REF 104

6-11-67

7 MAR 1968

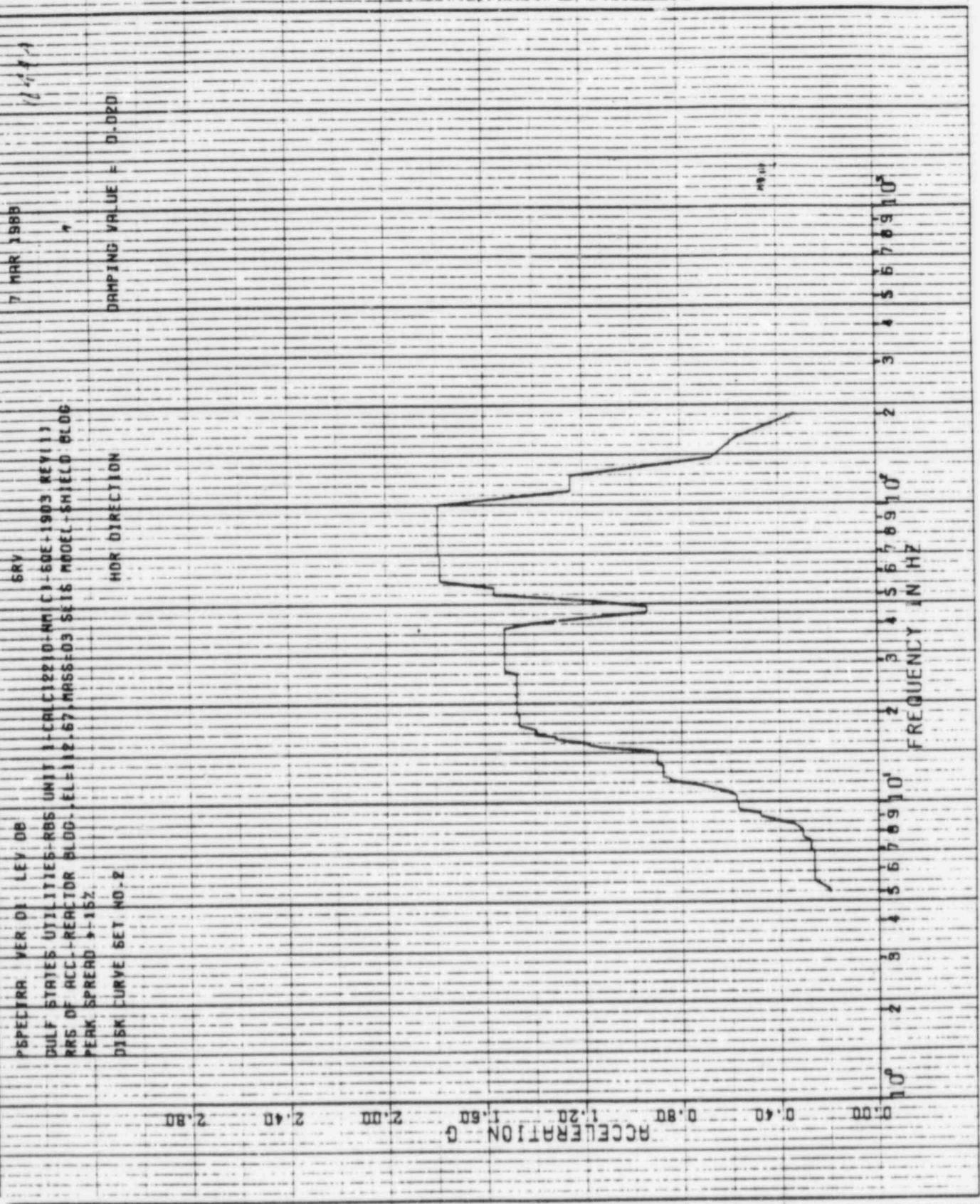
6RY
 PEPECTRA VER. 01 LEV. 08
 DULF STATES UTILITIES-RBS UNIT 1-CALC12210-AM C1-60E-1903 REV111
 RRS OF ACC.-REACTOR BLDG. EL=112.67, MASS=03 S&S16 MODEL-SHIELD-BLDG
 PEAK SPREAD 3-15Z
 DISK CURVE SET NO. 2

DAMPING VALUE = 0.020

HOR DIRECTION

ACCELERATION G

FREQUENCY IN HZ



11-4-57

7 MAR 1963

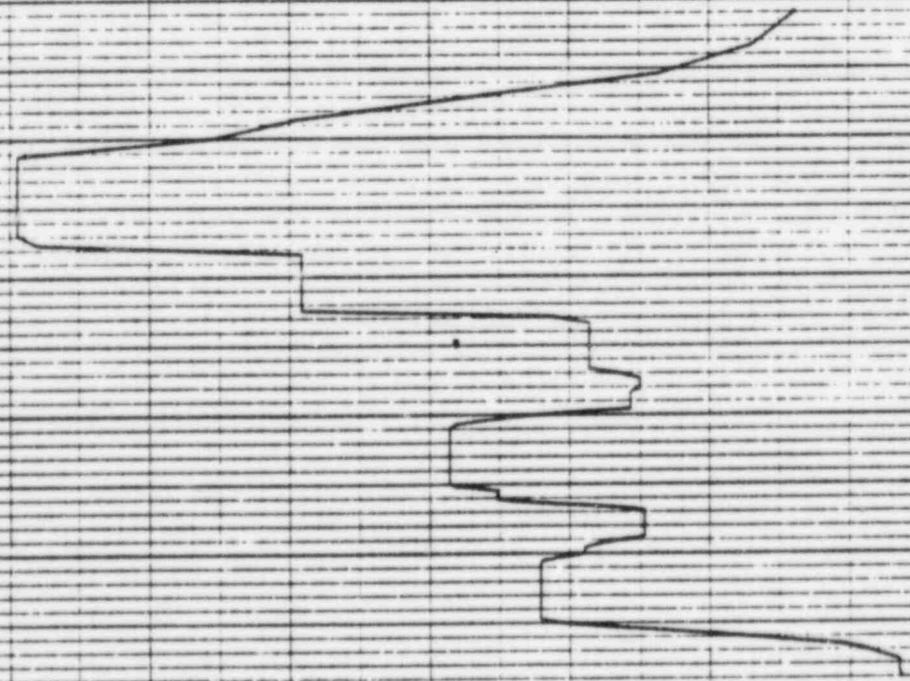
PSPECTRA VER DI LEV DB
 GULF STATES UTILITIES-RBB UNIT 1-CALC(12210-NN(C)-SDE-1963 REV11)
 RRS OF ACC--REACTOR BLDG., ELEV 12.67, MASS 109 5E16 MODEL-SHIELD BLDG
 PERK SPHERD -> 15Z
 DISK CURVE SET NO. 2

DAMPING VALUE = 0.020

VER DIRECTION

ACCELERATION G
 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ
 10⁰ 2 3 4 5 6 7 8 9 10¹



PSPECTRA VER 01 LEV 08

SRV

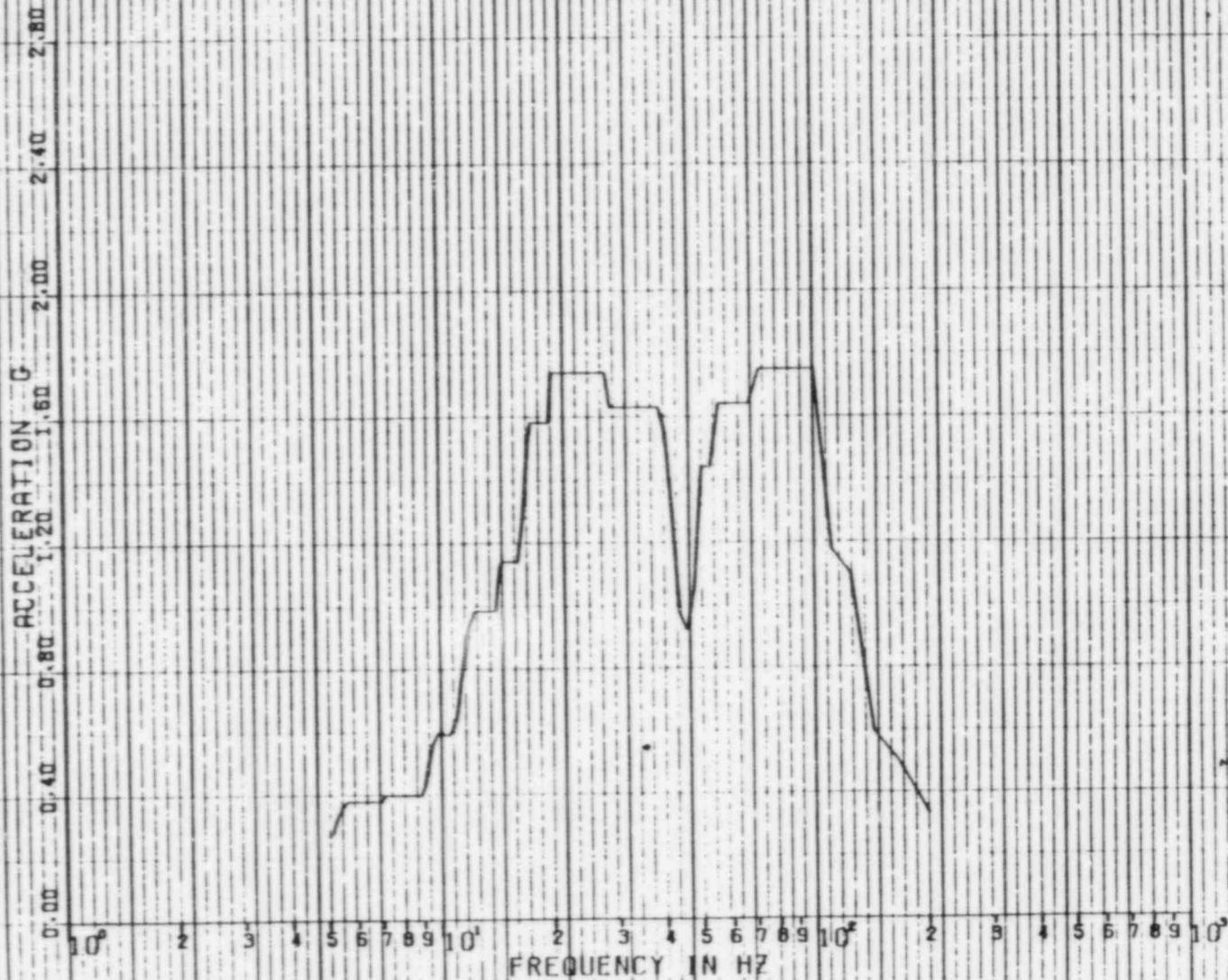
7 MAR 1988

GULF STATES UTILITIES-RBS UNIT 1-CALC12210-MMIC)-SDE-1909 REV113
RRS OF ACC.-REACTOR BLDG.-EL=192.99,MASS=04 SEIS MODEL-SHIELD BLDG
PEAK SPREAD: +/-15%

DISK CURVE SET NO.3

HDR DIRECTION

DAMPING VALUE = 0.020



REF 105

11/07/53

7 MAR 1955

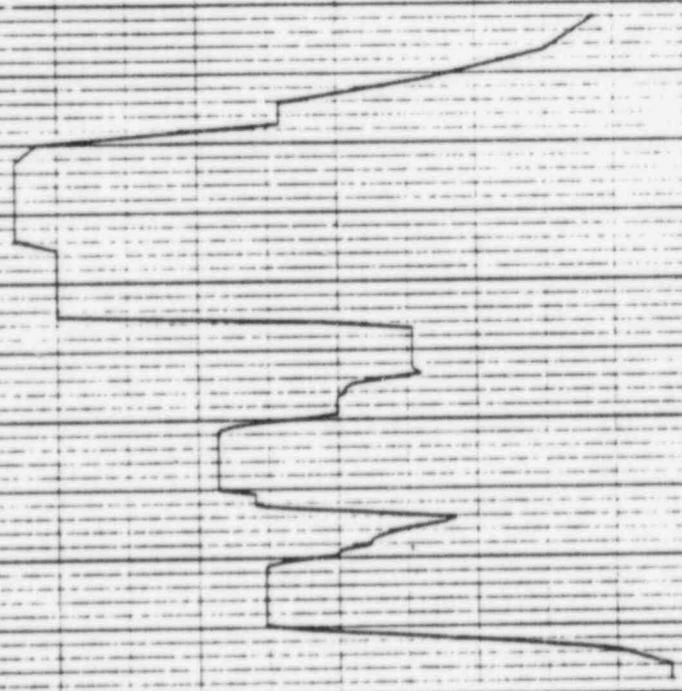
PSPECTRA VER. D1 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CR1C12210-WH C1-50E-1903 REV(1)
 RBS OF ACC.-REACTOR BLDG., EL-192.99, MASS=DN SEIS MODEL-SHIELD 0LOG
 PEAK SPREAD ±15Z
 DISK CURVE SET NO. 5

DAMPING VALUE = 0.020

VER. DIRECTION

ACCELERATION
 0 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰ 2 3 4 5 6 7 8 9 10¹
 FREQUENCY IN HZ



REF 106

1.904

7 MAR 1985

SRA
 SPECTRA VER ON LEV DB
 GULF STATES UTILITIES-R86 UNIT 1-CALC12210-NMIC7-50E-1805 REV117
 RRS OF ACC-MERCYDR BLDG-ELL-159-32-MR55E05 SET6 MODEL-SHIELD OLOG
 PERK SPREAD #-15Z
 DISK CURVE SET NO-4
 HDR DIRECTION
 DAMPING VALUE = 0.020

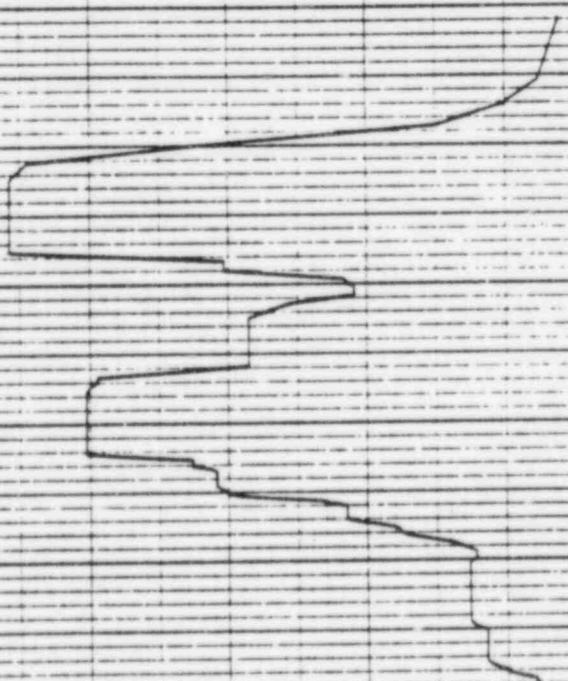
HDR DIRECTION

DISK CURVE SET NO-4

DAMPING VALUE = 0.020

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80

FREQUENCY IN HZ 10⁰ 2 3 4 5 6 7 8 9 10¹ 2 3 4 5 6 7 8 9 10² 3 4 5 6 7 8 9 10³



REF 106

11774

7 MAR 1988

PSPECTRA VER. DIR LEV. DB
 DULF STATES UTILITIES-RBS UNIT 1-CR. C1221D-NM1C7-5DE-1909 REV. 1.0
 RRS. OF REC.-REACTOR BLDG.-LEL-159-32, MASS. 505 SEIS. MODEL-SHIELD BLDG
 PERK SP. PERD. = 15%
 DISK CURVE SET NO. 4

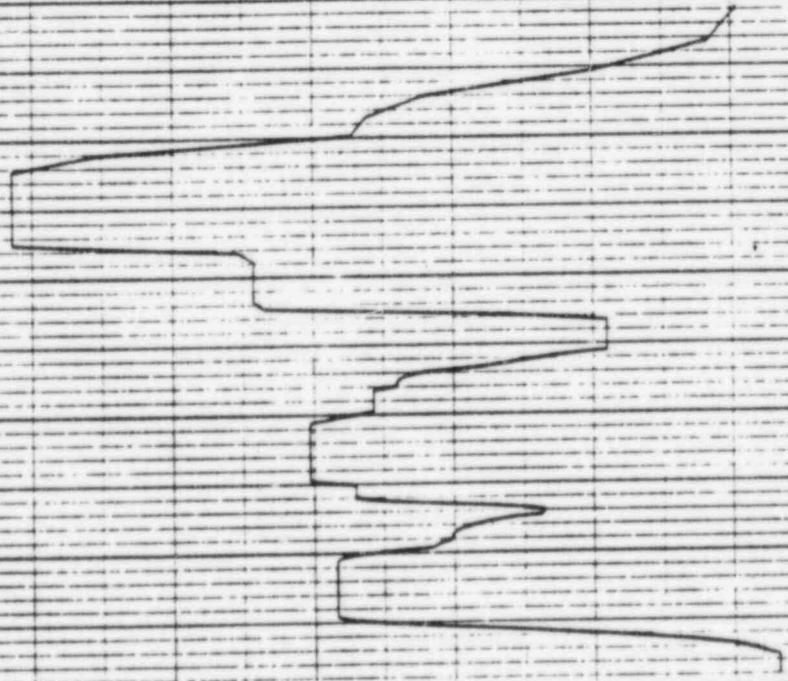
SRV

DAMPING VALUE = 0.020

VER DIRECTION

ACCELERATION 0 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰ 2 3 4 5 6 7 8 9 10¹
 10¹ 2 3 4 5 6 7 8 9 10²
 10² 2 3 4 5 6 7 8 9 10³
 FREQUENCY IN HZ

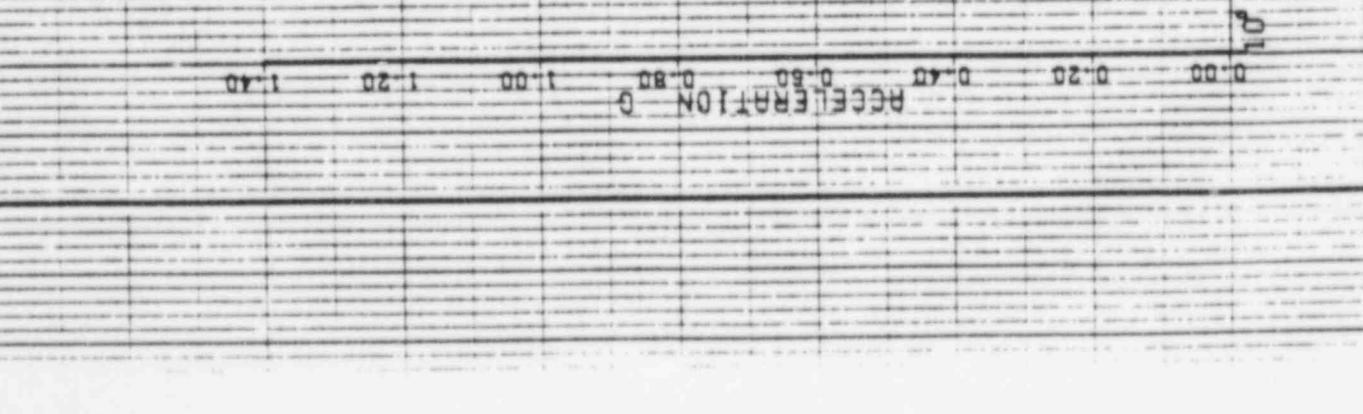


7. MAR 1983

DAMPING VALUE = 0.020

SRV
CALF STATES UTILITIES-RBS UNIT 1-CALC1221D-MMICJ-SDE-1903 REV113
RRS OF RCC--REACTOR BLDG., EL-179.65, MASS=06 SE16 MODEL-SHIELD BLDG
PEAK SP7ERD *-15Z
DISK CURVE SET NO.5

HDR DIRECTION



10⁰ 10¹ 10² 10³
FREQUENCY IN HZ

7 MAR 1983

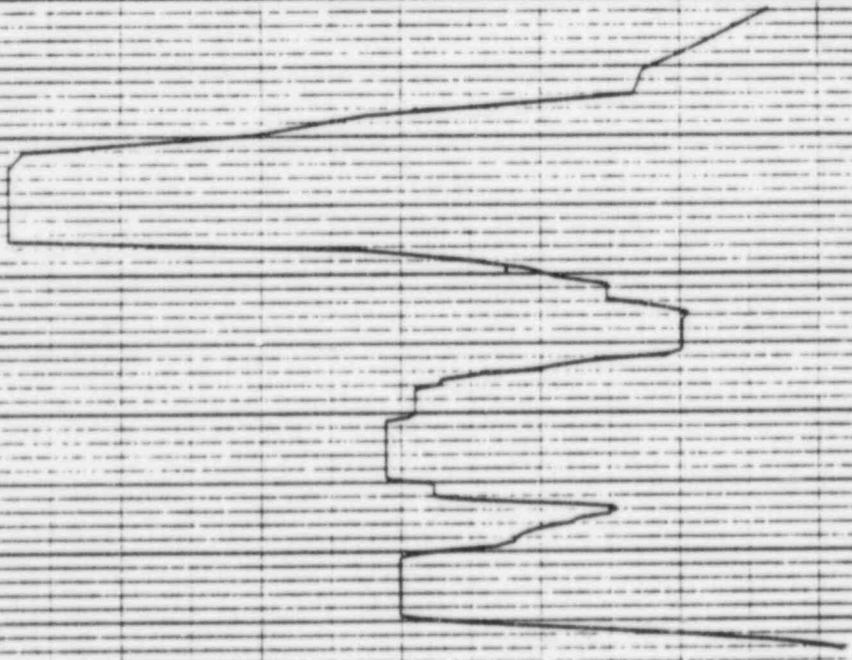
SRV
P6PCTRR VER 01 LEV 08
DULF STATES UTILITIES-RBS UNIT 1-CALC12210-MM1C1-5DE-1903 REV111
RRS OF ACC-REACTOR BLDG.-EL-173.55, MASS-D6, SEIS MODEL-SHIELD BLDG
PEAK SPREAD +-15Z
DISK CURVE SET NO.5

DAMPING VALUE = 0.020

VER DIRECTION

ACCELERATION 0 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰ 2 3 4 5 6 7 8 9 10¹
FREQUENCY IN HZ 2 3 4 5 6 7 8 9 10⁰



REF 108

M/S: 4

7 MAR 1985

SRV
DULF STATES UTILITIES-R86 UNIT 1-CALC12210-MMCT1-SOE-1903 REV11)
KKS OF ACC.-REACTOR BLDG.-EL-193.98-MR66E07 SEIS MODEL-SHIELD BLDG
PEAK SPREAD +/-15%
DISK CURVE SET NO.6

DAMPING VALUE = 0.020

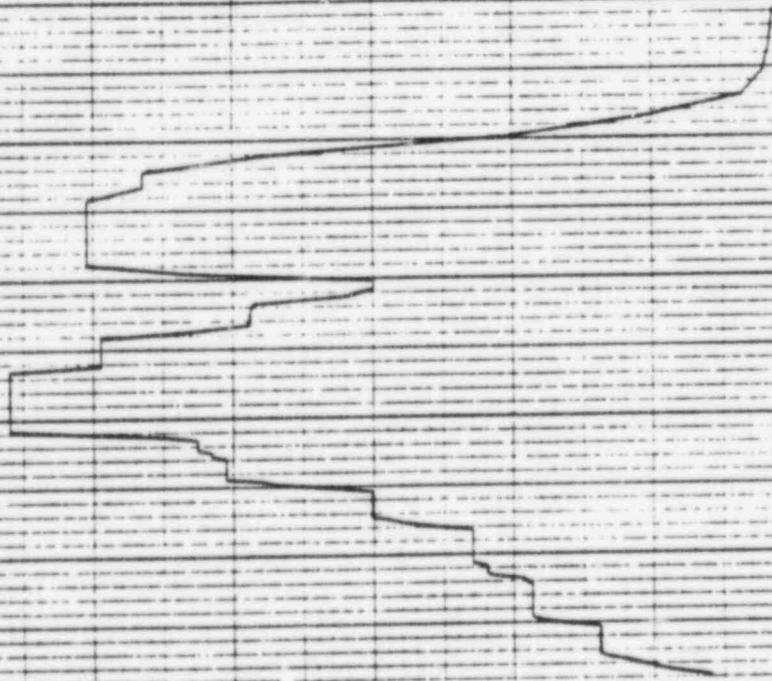
HOR DIRECTION

ACCELERATION G

1.40 1.20 1.00 0.80 0.60 0.40 0.20 0.00

10⁰ 2 3 4 5 6 7 8 9 10¹ 2 3 4 5 6 7 8 9 10²

FREQUENCY IN HZ



7 MAR 1983

SRV

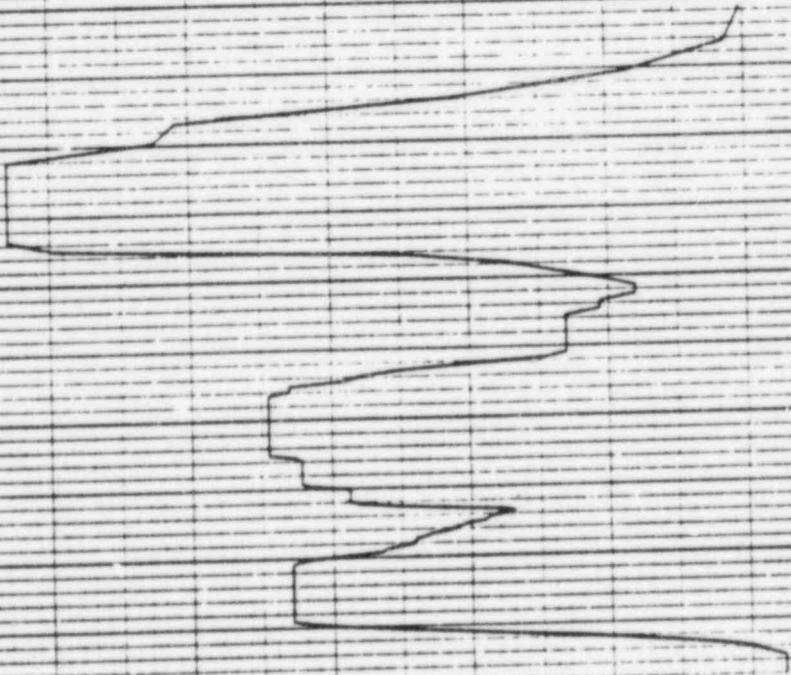
PSECTRA VER DA LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM1CJ-5DF-1909 REV11)
 RRS OF ACC.-REACTOR BLDG.-EL-193.88.MASS-07 SE15 MODEL-SHIELD BLOC
 PEAK SPREAD 9-15Z
 DISK CURVE SET NO.6

DAMPING VALUE = 0.020

VER DIRECTION

ACCELERATION G
 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰
 2 3 4 5 6 7 8 9 10¹
 FREQUENCY IN HZ
 2 3 4 5 6 7 8 9 10²
 3 4 5 6 7 8 9 10³



NS44

REF 109

7 MAR 1989

SRV
P6SPECTRA VER 01 LEV 08
DULF STATES UTILITIES-RB6 UNIT 1-CR-C1221D-NM1C7-50E-1900 REV113
RMS OF ACC.-REACTOR BLDG.-EL-214.51-MASSE-DB SEIS MODEL-SHIELD BLDG
PERK SPREAD 3--15Z

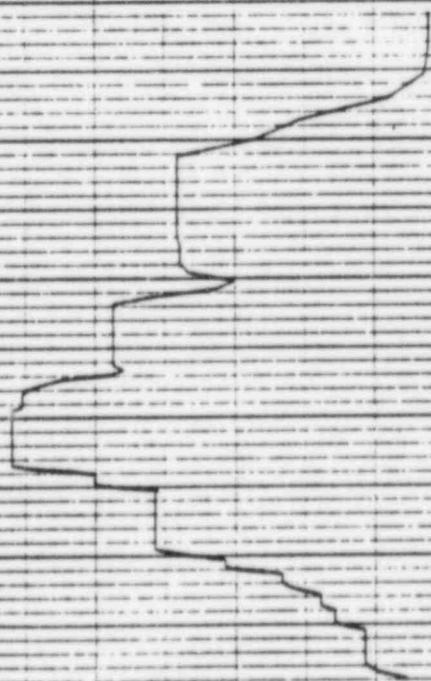
DAMPING VALUE = 0.020

HDR DIRECTION

DISK CURVE SET NO. 7

ACCELERATION G
0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80

FREQUENCY IN HZ
10⁰ 2 3 4 5 6 7 8 9 10¹

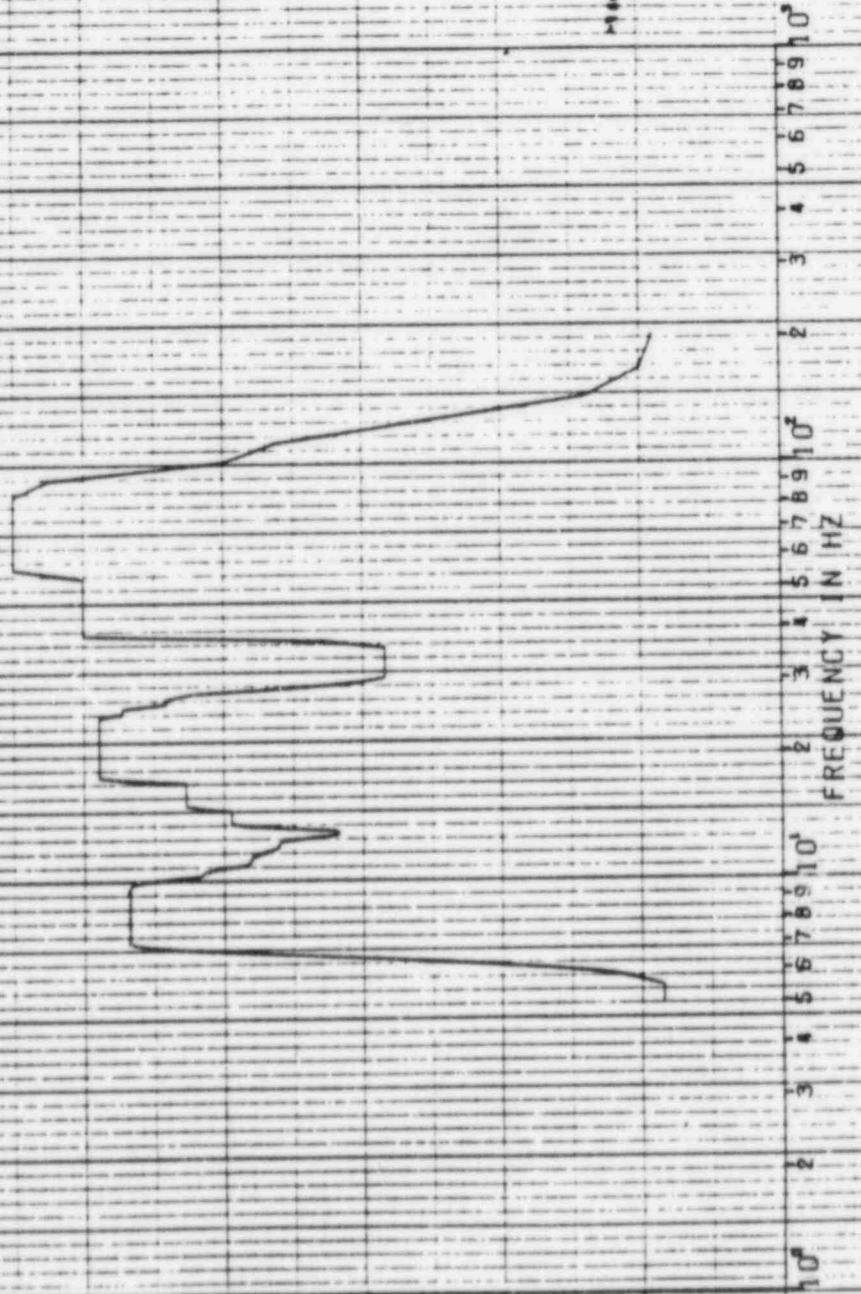


REF 109

7 MAY 1963

PSPECTRA VER D0 LEV DB
 SRV
 DULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM1C7-5DE-1903 REV(1)
 RMS OF ACC.-REACTOR BLDG.-EL-214.91.MASS-DB SE16 MODEL-SHIELD BLDG
 PEAK SPREAD +/-35Z
 DISK CURVE SET NO.7
 VER DIRECTION
 DAMPING VALUE = 0.020

ACCELERATION
 0.00
 0.20
 0.40
 0.60
 0.80
 1.00
 1.20
 1.40



4564

7 MAR 1983

SRV
 PSPE TRA VER D0 LEV DB
 DAILY UTILITIES-RBS UNJT 1-CALC12210-NMIC1-5DE-19D3-REV117
 RRS OF REC.-REACTOR BLDG.-EL-PWB.DD-MASS-DB SET6 MODEL-SHIELD BLDG
 PERK SPREAD 4-15Z
 DISK CURVE SET NO.8
 HOR DIRECTION
 DAMPING VALUE = 0.020

ACCELERATION

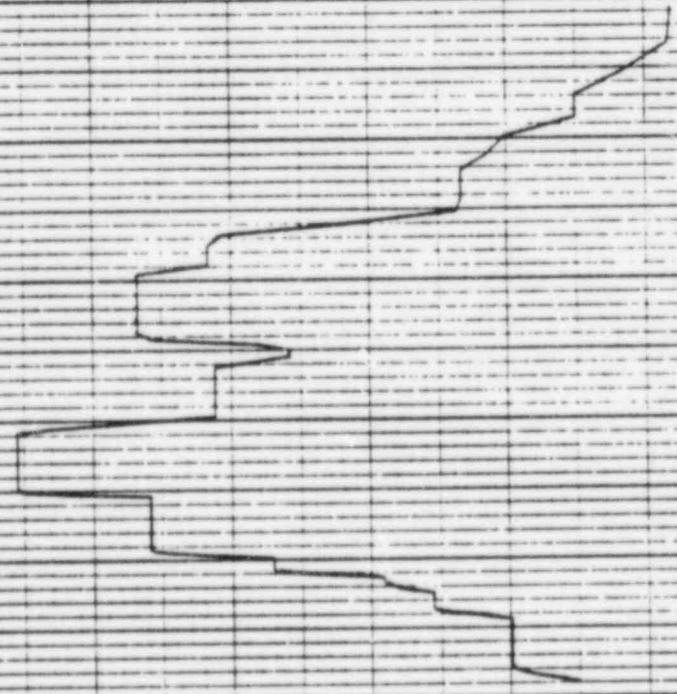
10⁰

FREQUENCY IN HZ

10⁰

0.00
 0.20
 0.40
 0.60
 0.80
 1.00
 1.20
 1.40

0.00
 0.20
 0.40
 0.60
 0.80
 1.00



4564

REF 110

7 MAR 1988

SRV
1-CALC1221D-MM1C1-5DE-19D3 REV11J
MASS-DB SEIS MODEL-5HIELD BLDG
EL-248.DD
PEAK SPREAD: 7-15Z

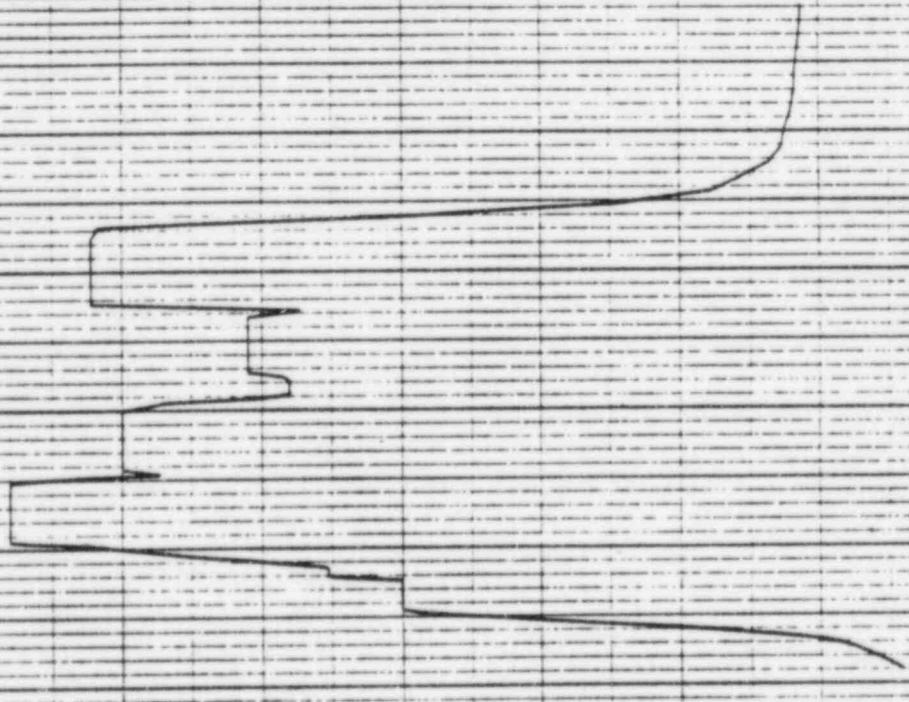
DAMPING VALUE = 0.020

VER. DIRECTION

DISK CURVE SET NO. B

ACCELERATION G
0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80

FREQUENCY IN HZ
10⁰
2 3 4 5 6 7 8 9 10¹
2 3 4 5 6 7 8 9 10²
2 3 4 5 6 7 8 9 10³



REF 111

7 MAR 1985

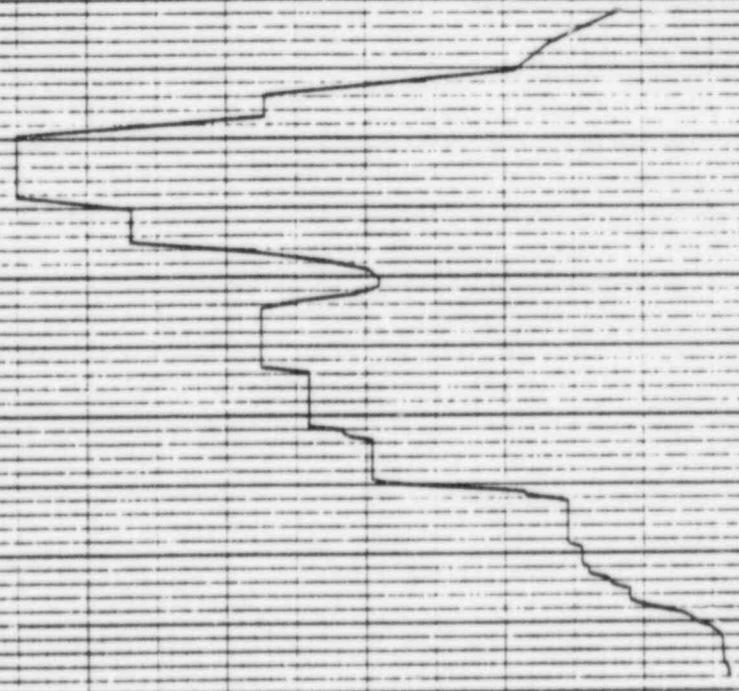
SRV
PSECTRA VER D01 LEV 08
GULF STATES UTILITIES-RB6 UNIT 3-CALCIPRD-NMICH-SDE-1803 REV111
RRS OF REC.-REACTOR BLDG.-FL-96-000, MASS-10 SEIS MODEL-CDMP-SND-B00
PERK SPREAD 4-15Z
DISK CURVE SET NO. 9

DAMPING VALUE = 0.020

NRD DIRECTION

ACCELERATION G
0.80 0.40 0.00
1.20 1.50 2.00 2.40 2.80

10⁰
2 3 4 5 6 7 8 9 10¹
2 3 4 5 6 7 8 9 10²
2 3 4 5 6 7 8 9 10³
FREQUENCY IN HZ



444

REF 111

7 MAR 1983

SRV

PSPECTRA VER D1 LEV DB

DULF STATES UTILITIES-PBS UNY 1-CR1C12210-MH1J-5DE-1903 REV11P.
RRS DF ACC.--REPEYDR BLDD..EL-95-000.MASS-1D SEIS MODEL-COMP-5MD-800
PERK SPREAD +-15Z

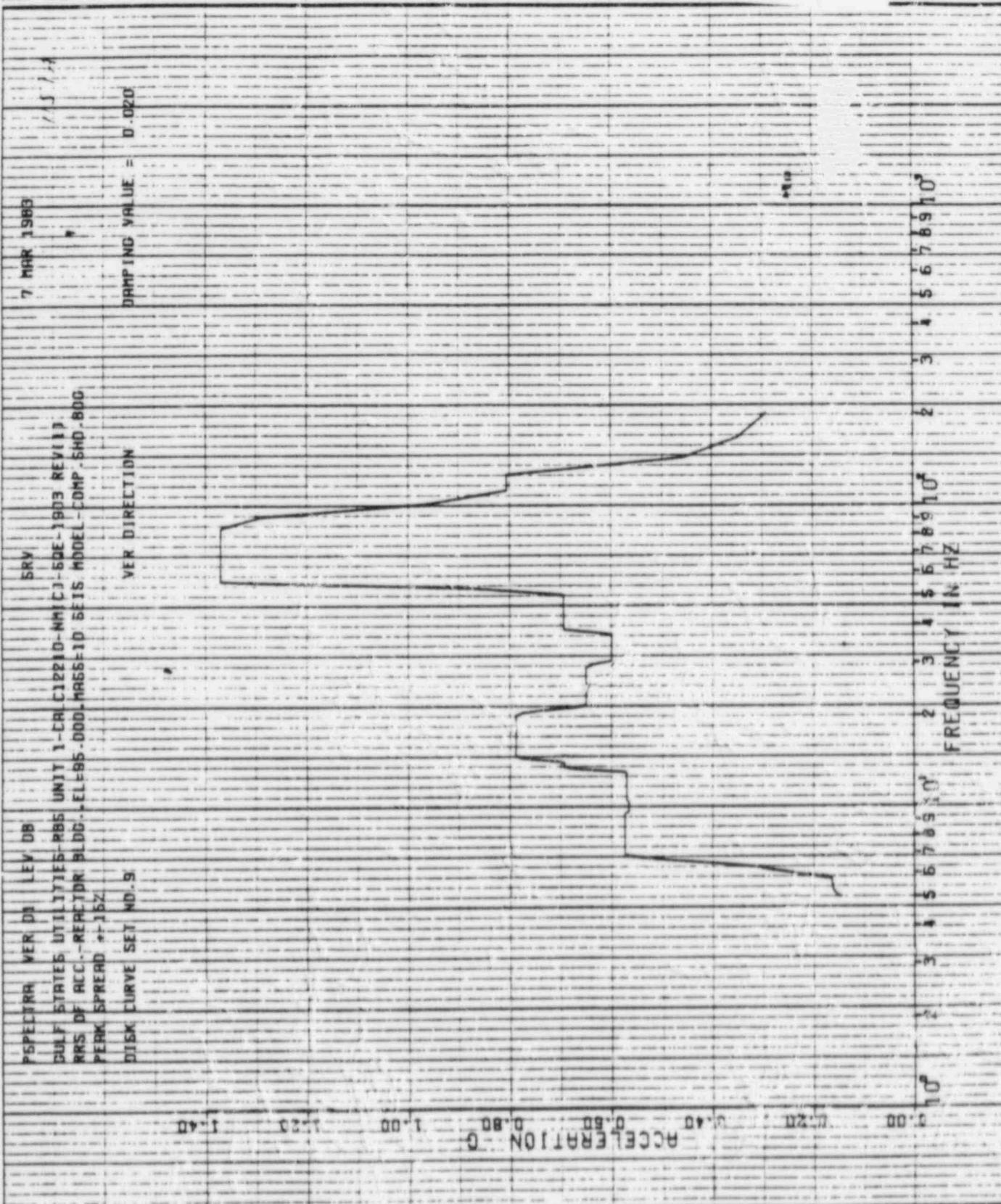
DISK CURVE SET NO.9

VER DIRECTION

DAMPING VALUE = 0.020

ACCELERATION -G

FREQUENCY IN HZ



REF 112

7 MAR 1969

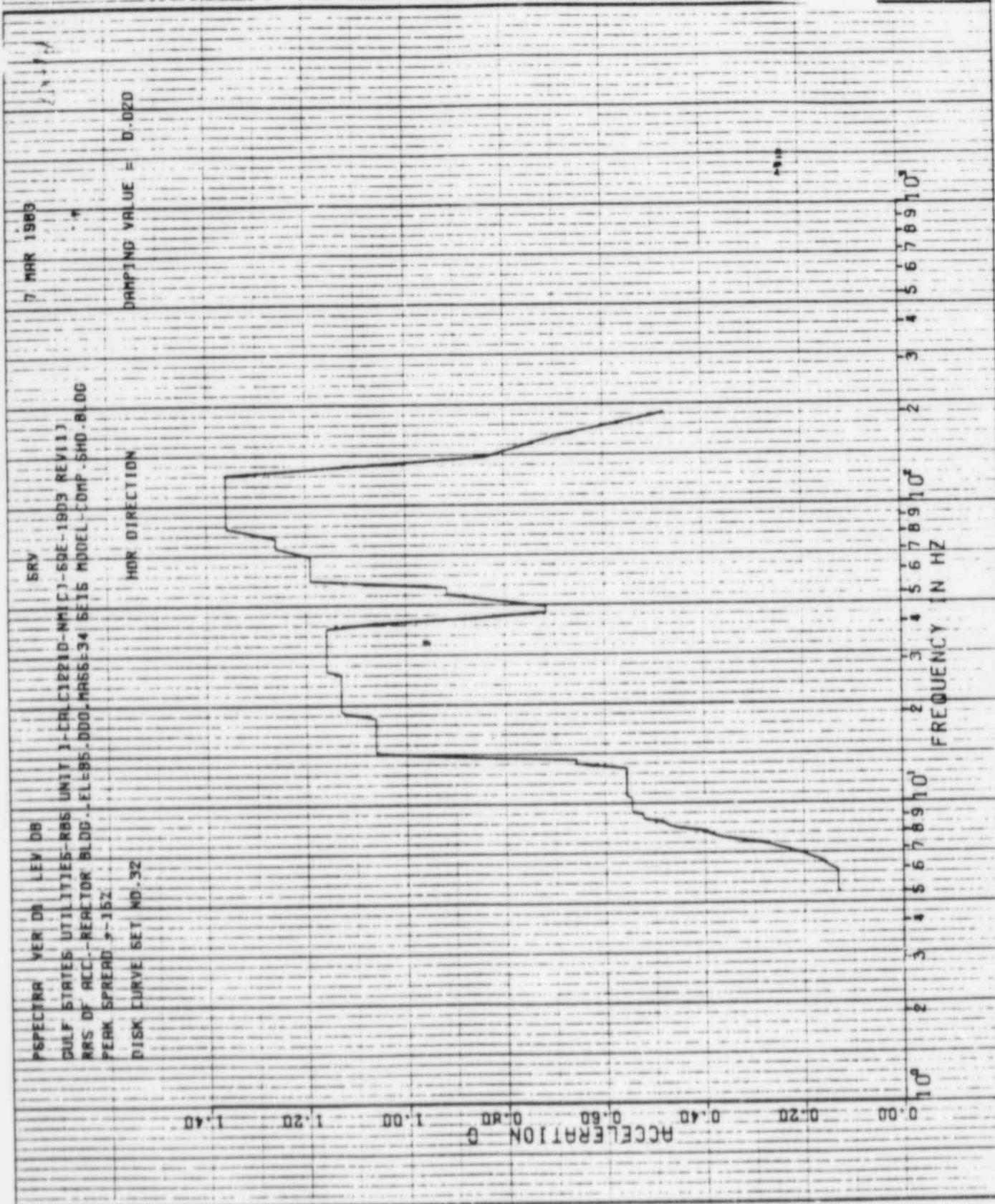
PSPECTRA VER DB LEV DB
 GULF STATES UTILITIES-RBS UNIT 3-CALCIPRID-NM1C7-5QE-19D9 REV111
 MRS OF ACC.-REACTOR BLDG..EL-85-DDO.MASS-34 SETS MODEL-COMP-SMD-8100
 PEAK SPREAD 3-15Z
 DISK CURVE SET NO.32

DAMPING VALUE = 0.020

HOR DIRECTION

ACCELERATION G

FREQUENCY IN HZ



REF 112

7 MAR 1985

6RV

P6PECTRA VER 01 LEV 08

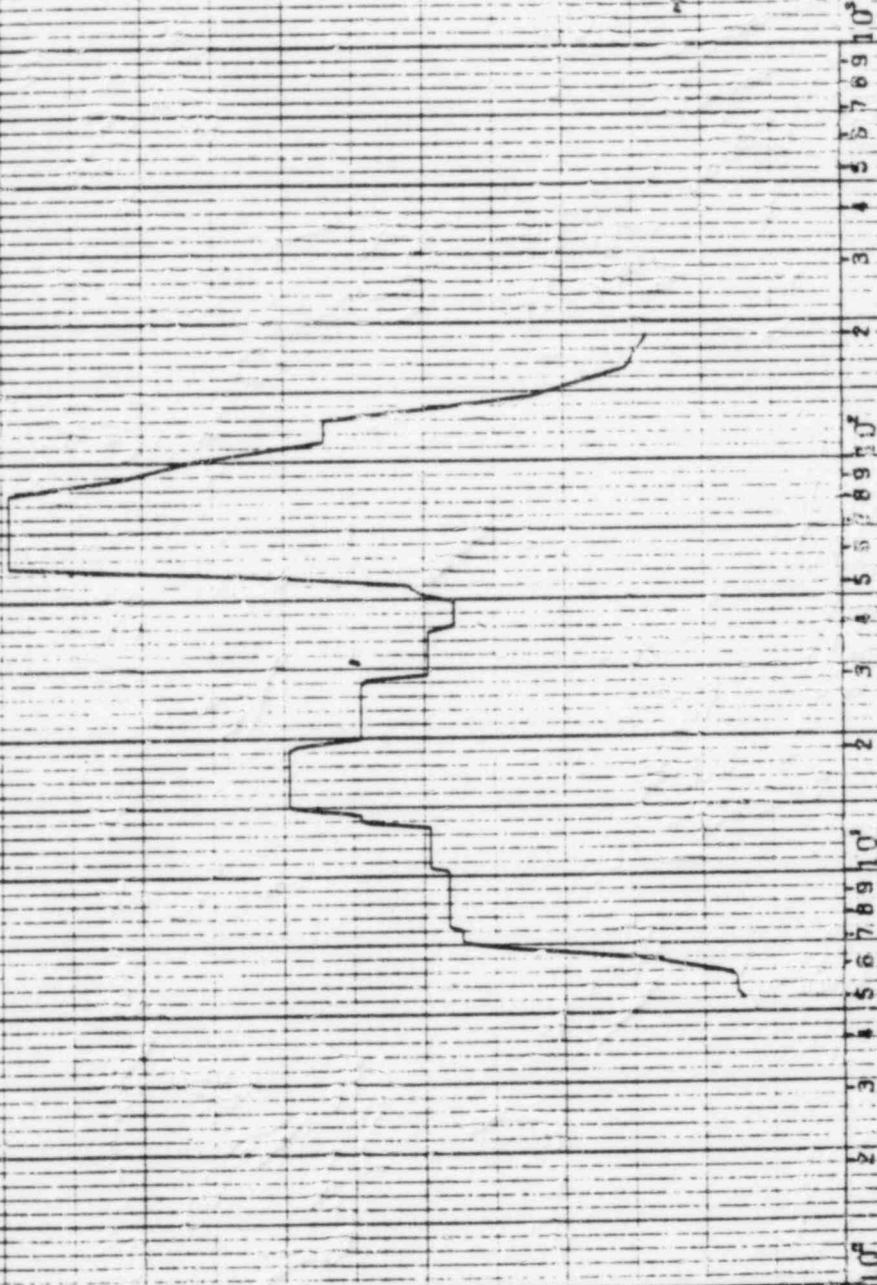
DULF STATES UTILITIES-R86 UNIV 1-CALC1221D-MMICJ-5DE-1808 REV117
RRS OF ACC.-REACTOR BLDG. EL=85.000, MASS=34.5E16 MODEL-COMP-5HD-8LOG
PEAK SPREAD +/-15Z

DISK CURVE SET NO.32

VER DIRECTION

DAMPING VALUE = 0.020

ACCELERATION G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40



FREQUENCY IN HZ

REF 113

7 MAR 1988

SRV

PSPECTRA VER DA LEV DB

DOLF STRIES UTILITIES-RBS UNIT 1-CR-C1221D-NM(C)-SDE-1809 REV11)
RPS OF REC.-REACTOR BLDG..EL=114.00, NRSS=11 5E16, MODEL-STEEL CONT
PEAK SPREAD +-15Z

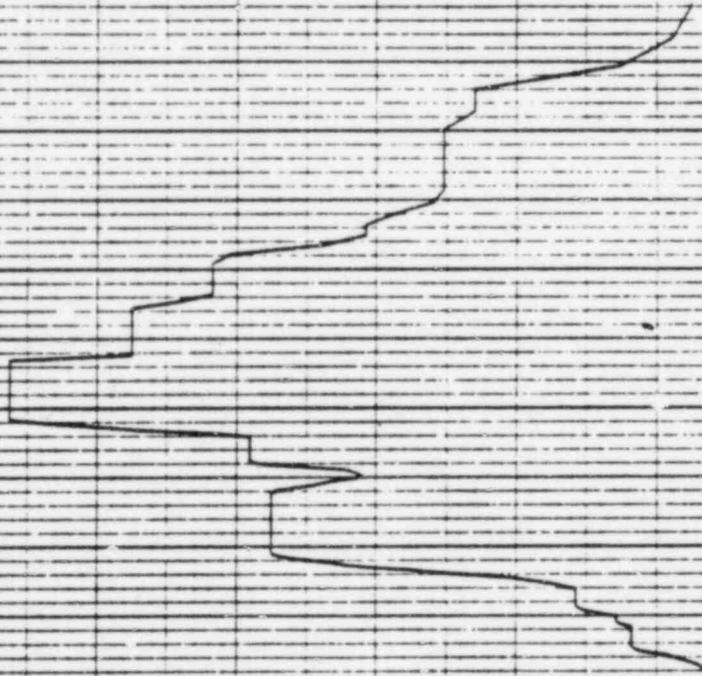
DISK CURVE SET NO. 10

MDR DIRECTION

DAMPING VALUE = 0.020

ACCELERATION 0 0.80 1.20 1.60 2.00 2.40 2.80

10⁰
2 3 4 5 6 7 8 9 10¹
2 3 4 5 6 7 8 9 10²
2 3 4 5 6 7 8 9 10³
FREQUENCY IN HZ



161A

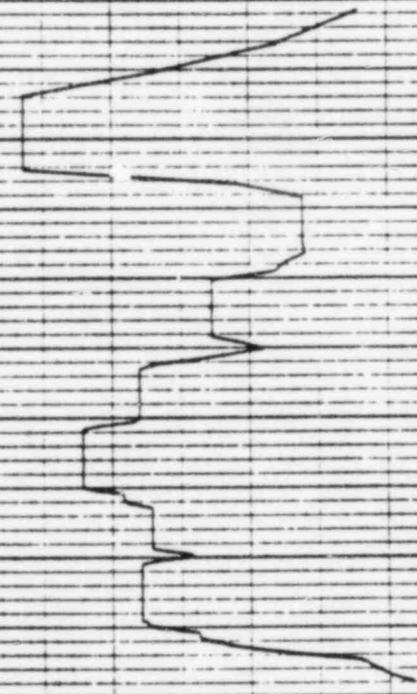
REF 113

7 MAR 1983

SRV
 PSPECTRA VER DA LEV DB
 DULF STATES UTILITY UNIT 1-CALC12210-NMICH1-6DE-1903 REV117
 RRS OF RCC-REACTOR BLDG...EL-114.00.MRS5-11 SE16 MODEL-STEEL COMT
 PERK SPREAD -15Z
 DISK CURVE SET NO.110
 VER. DIRECTION
 DAMP/ND VALUE = D.D2D

ACCELERATION 0 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰ 2 3 4 5 6 7 8 9 10¹ 2 3 4 5 6 7 8 9 10² 2 3 4 5 6 7 8 9 10³
 FREQUENCY IN HZ



111200

7 MAR 1988

REF 114

SRV
 PSPECTRA VER DA LEV DB
 GULF STATES UTILITIES-RBS UNIT 1-CALCIZZID-NM(C)-SDE-1983 REV113
 RRS OF REC-REACTOR BLDG--EL-139-00, MASS-12 5E16 MODEL-STEEL CONT
 PEAK SPREAD +/-15Z
 DISK CURVE SET NO. 11
 HOR DIRECTION
 DAMPING VALUE = 0.020

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80

FREQUENCY IN HZ
 10⁰
 2 3 4 5 6 7 8 9 10¹
 2 3 4 5 6 7 8 9 10¹
 2 3 4 5 6 7 8 9 10¹



REF 114

7 MAR 1988

DAMPING VALUE = 0.020

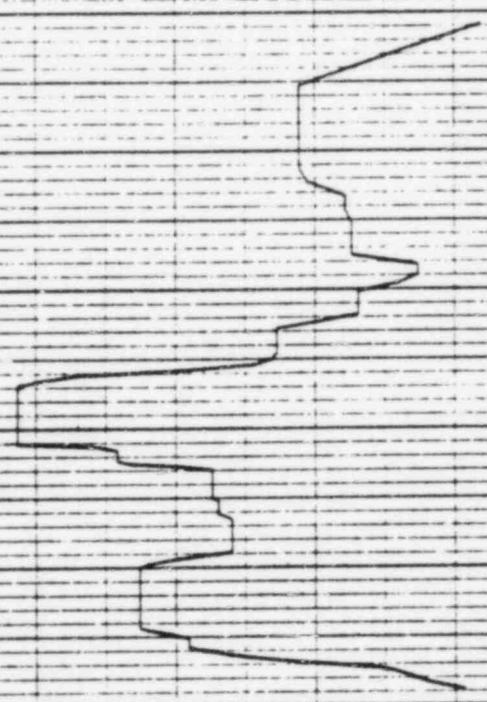
SRV
SPECTRA VER D1 LEV DB
CALF STATES UTILITIES-RB5 UNIT 1-CALC1221D-NM1C7-5DE-19D3 REV11J
RRS OF ACC.-REACTOR BLDG.-FL-193.00,MA65-12 5E16 MODEL-STEEL CONT
PEAK SPREAD ±15Z

VER DIRECTION

DISK CURVE SET NO.11

ACCELERATION G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ
10⁰
2 3 4 5 6 7 8 9 10¹
2 3 4 5 6 7 8 9 10²
2 3 4 5 6 7 8 9 10³



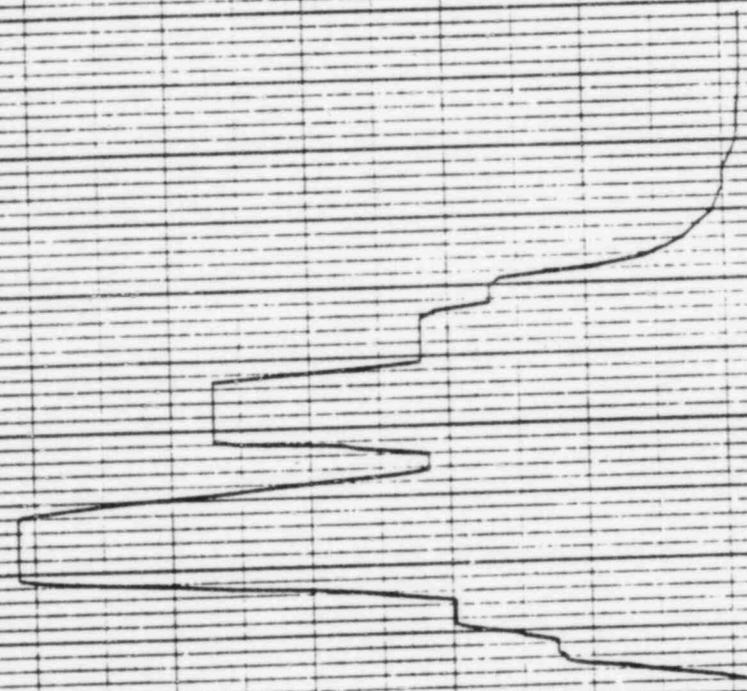
REF 115

7 MAR 1969

50V

P6PECTRA VER DI LEV DB
 DULF STATES UTILITIES-R86 UNIT 1-CALC1221D-MN1CJ-5DE-1903 REV111
 RRG OF ACC.-REACTOR BLDG.-ELL-152.00-M855-13 SET15 MODEL-STEEL CONT
 PERK SPREAD *-15Z
 DTSK CURVE SET NO.12
 HOR DIRECTION
 DAMPING VALUE = 0.020

0.00
 0.40
 0.80
 1.20
 1.60
 2.00
 2.40
 2.80
 ACCELERATION G



10⁰
 2 3 4 5 6 7 8 9 10¹
 FREQUENCY IN HZ

REF 115

11/11/74

7 MAR 1983

W

DAMPING VALUE = 0.020

PSPECTRA VER 01 LEV 08
CALF STATES UTILITIES-RB5 UNIT 1-CALC1220-NM(C)-5DE-1909 REV113
RRS OF RCC--REACTOR BLDG.-EL=162.00, MASS=19 SEIS MODEL--STEEL CONT
PERK SPREAD +-15Z

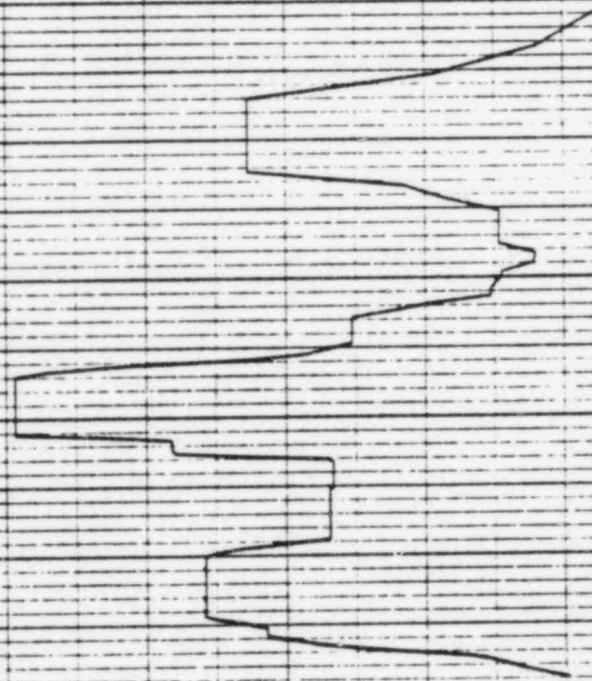
VER DIRECTION

DISK CURVE SET NO. 12

ACCELERATION G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰ 2 3 4 5 6 7 8 9 10¹

FREQUENCY IN HZ



49.16

1166A

7 MAR 1963

DAMPING VALUE = 0.020

REF 116

SRV
 HOR DIRECTION

PSPECTRA VER ON LEV DB
 GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NMCI7-50E-1903 REV113
 RRS OF ACC.-REACTOR BLDG.-EL-185-DD-MAS6-14 5E16 MODEL-STEEL CONT
 PERK SPREAD +-15Z
 DISK CURVE SET NO.13

ACCELERATION G
 0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80

10⁰
 2 3 4 5 6 7 8 9 10¹
 2 3 4 5 6 7 8 9 10²
 3 4 5 6 7 8 9 10³
 FREQUENCY IN HZ



REF 116

7 MAR 1983

10.12.4

SRV
SPECTRA VER D1 LEV DB
PULF STATES UTJ JVES-RBS UNY 1-CALCIP210-MM C7-5DE-19D9 REV11 D
ARS OF ACC-REACTOR BLDG-LEL-186.00-MASSE11/SE16 MOEL-STEEL CONT
PEAK SPREAD *-15Z

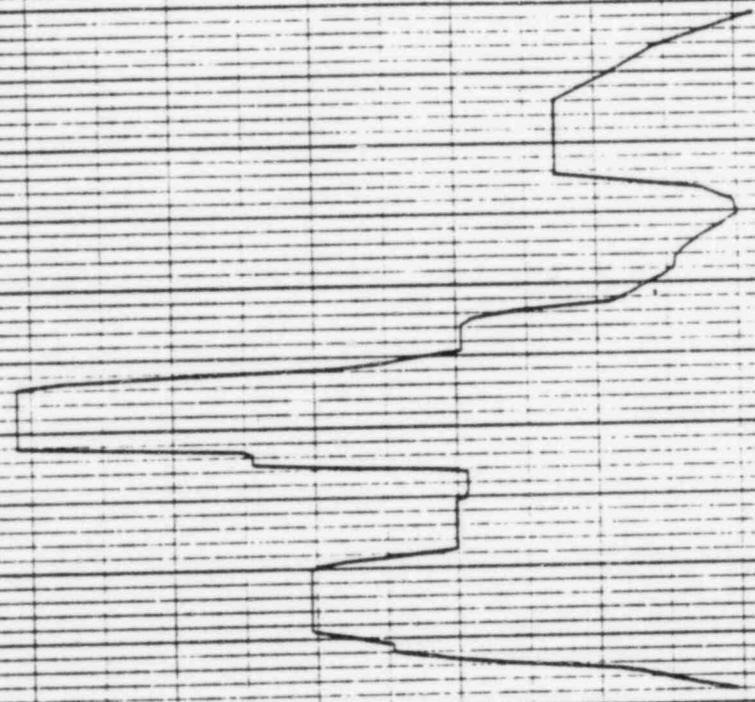
DISK CURVE SET NO.19

VER DIRECTION

DAMPING VALUE = 0.020

ACCELERATION G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰ 2 3 4 5 6 7 8 9 10¹
FREQUENCY IN HZ
2 3 4 5 6 7 8 9 10²
2 3 4 5 6 7 8 9 10³



REF 117

W-117A

7 MAR 1988

DAMPING VALUE = 0.020

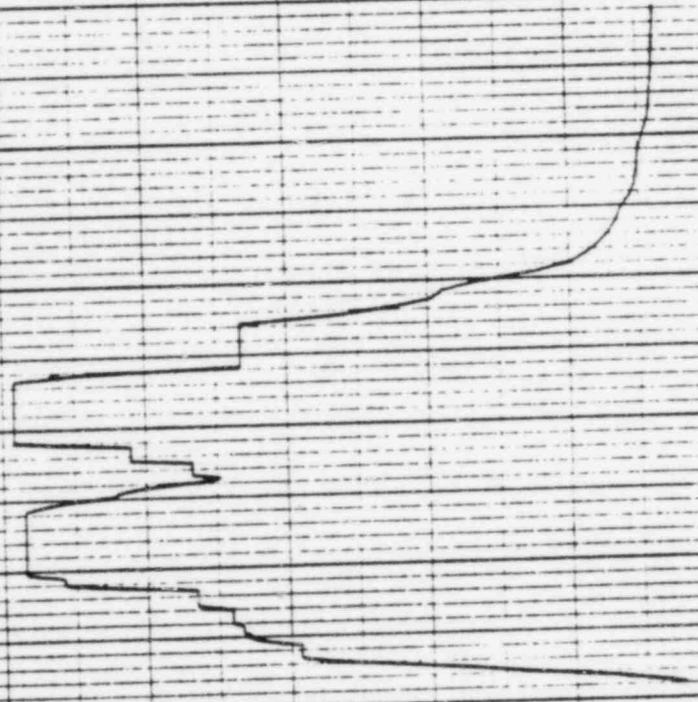
PSPECTRA VER DI LEV DB
 GULF STATES UTILITIES-RBS UNIT 1-CALC 12210-NM(C)-SDE-1909 REV 1.1
 RRS OF ACC.-REACTOR BLDG.-EL-212-DD, MASS-15 SEIS MODEL-STEEL CONT
 PEAK SPREAD +/-15Z
 DISK CURVE SET NO. 14

SRV

MDR DIRECTION

ACCELERATION
 0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80

FREQUENCY IN HZ
 10⁰ 2 3 4 5 6 7 8 9 10¹



0.011

7 MAR 1963

SRV

PSPECTRA VER DB LEV DB

GULF STATES UTILITIES-RBS UNIT 1-CALC1221D-NM(C)-SDE-1809 REV11)
RBS OF ACC.-REACTOR BLDG.-EL-212.00.MASS-15 SE16 MODEL-STEEL CONT
PEAK SPREAD +-15Z

DISK CURVE SET NO.14

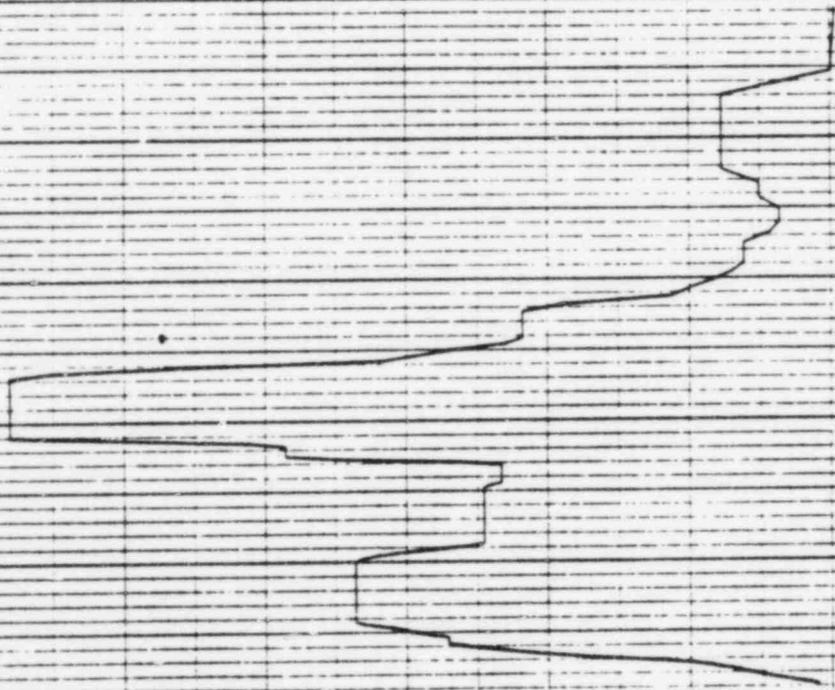
VER DIRECTION

DAMPING VALUE = 0.020

ACCELERATION 0 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰ 2 3 4 5 6 7 8 9 10¹ 10² 2 3 4 5 6 7 8 9 10³

FREQUENCY IN HZ



REF 119

7 MAR 1985

PEPECTRA VER 01 LEV 08
 DULF STATES UTILITIES-RBS UNIT 1-CALCIP210-NM1CJ-5DE-1803 REV11J
 RRS OF REC-REACTOR BLDG..EL-239.2D, MASS-16 5E16 MODEL-61EEL CONT
 PEAK SPREAD *-15Z
 DISK CURVE SET NO.15
 SRV
 HDR DIRECTION

DAMPING VALUE = 0.020

ACCELERATION G

FREQUENCY IN HZ



REF 118

7 MAR 1985

SRV
 VER DIRECTION
 DAMPING VALUE = 0.020

SRV
 VER DIRECTION

PSPECTRR VER ON LEV DB
 DULF STATES UTILITIES-RBS UNIT 1-CR1221D-NM1C1-5DE-19D3 REV11J
 RRS OF ACC.-REACTOR BLDG..EL=299.2D.MR55-16 SE16 MODEL-STEEL COMY
 PERK SPREAD +/-15Z
 DISK CURVE SET NO.15

ACCELERATION 0 1.00 2.00 3.00 4.00 5.00

FREQUENCY IN HZ
 10⁰
 2 3 4 5 6 7 8 9 10¹
 2 3 4 5 6 7 8 9 10²
 2 3 4 5 6 7 8 9 10³



REF 119

11224

7 MAR 1983

PSECTRR VER DB LEV DB
 DULF STATES UTILITIES-RBS UNIT 1-CALCULATED-NM(C)-5DE-1809 REV1 (D)
 RRS OF ACC.-REACTOR BLDG.-EL-85.000. MASS-17 5E15 MODEL-P5M, PEDESTAL
 PEAK SPREAD-P-15Z
 DISK CURVE SET NO. 16
 5RV
 DIRECTION
 DAMPING VALUE = 0.020

ACCELERATION 0 0.10 0.20 0.30 0.40 0.50 0.60 0.70

FREQUENCY IN HZ 10 2 3 4 5 6 7 8 9 10



REF 119

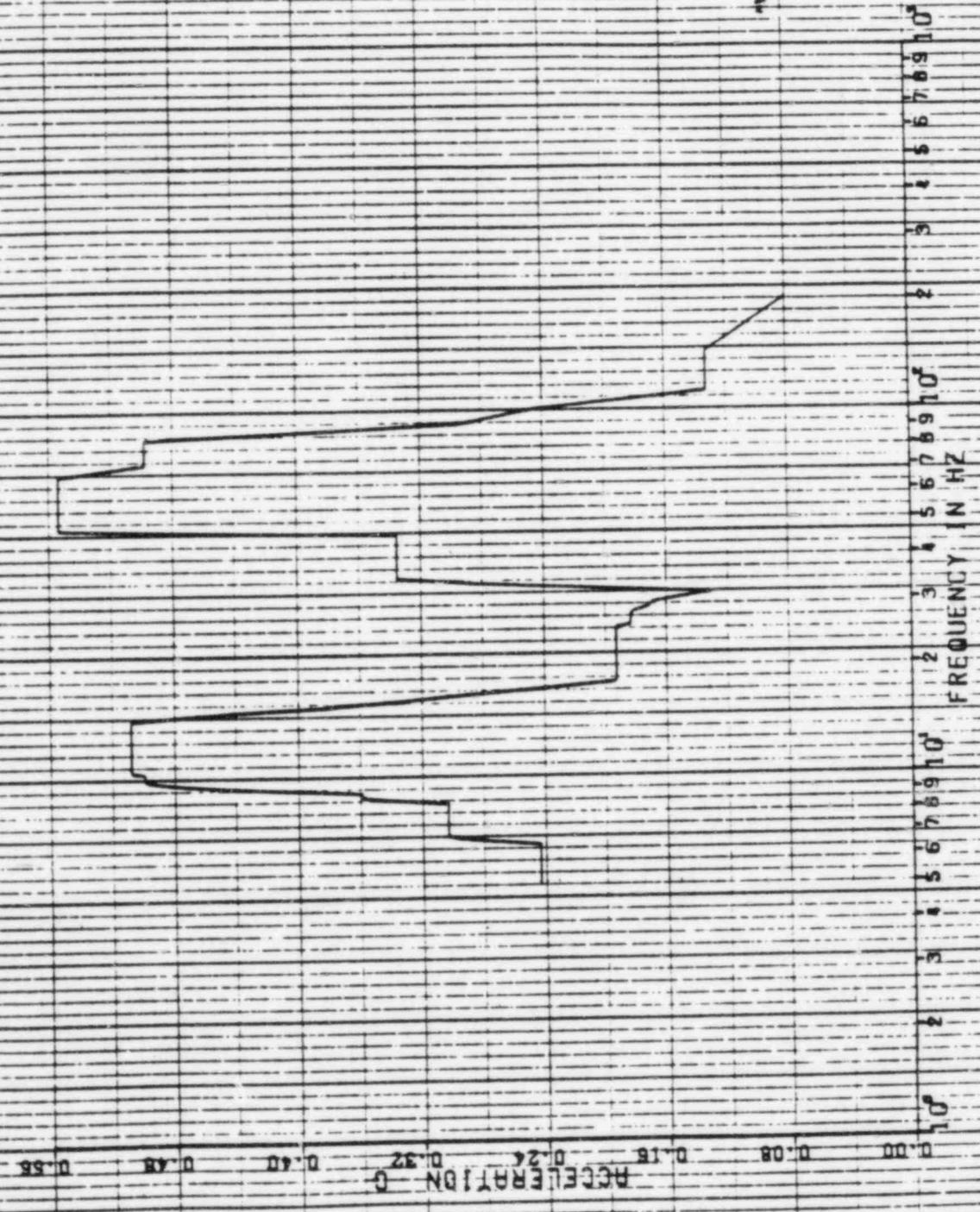
113A

7 MAR 1983

PSPECTRA VER DN LEV DB
 DULF STATES UT11J1E5-R85 UNIT 1-CALC12210-M1CJ-SDE-1903 REV113
 RMS OF ACC. REACTOR BLDG., EL-85-DDD, MASS-17 SE16 MODEL-PSM-PEDESTAL
 PEAK SPREAD: 1-15Z
 DISK CURVE SET NO.16

DAMPING VALUE = 0.020

VER DIRECTION



7 MAR 1983

PSPECTRA VER 01 LEV 02
 DULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM1C1-5DE-1809 REV11D
 RRS OF ACC.--REACTOR BLDG--EL=101.00, MASS=18 5E16 MODEL-PSW.PEDESTAL
 PEAK SPREAD *-15Z
 DISK CURVE SET NO.17

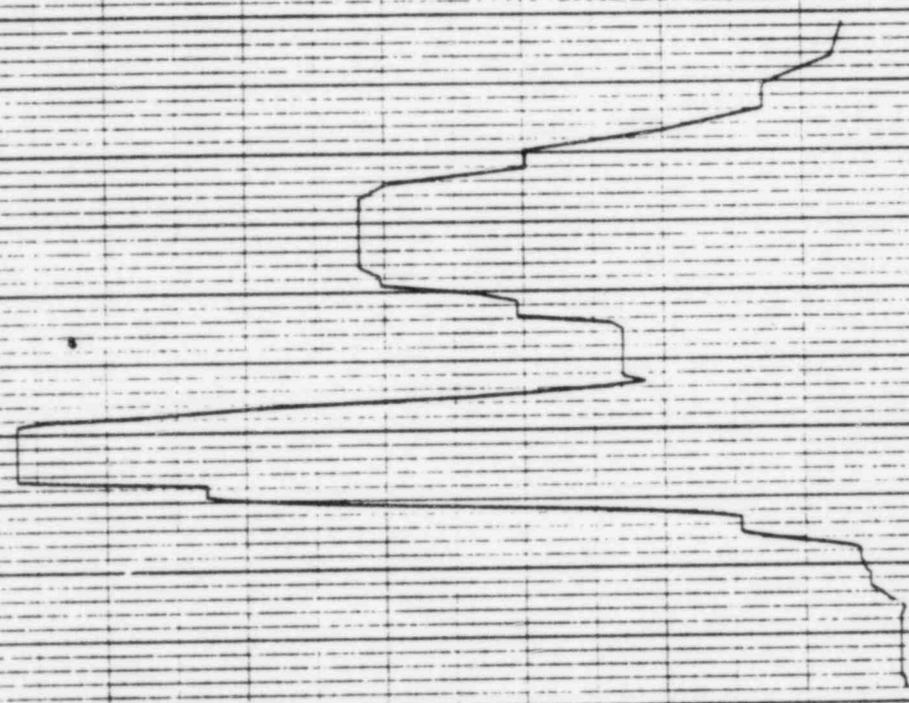
SRV

DAMPING VALUE = 0.020

HOR DIRECTION

ACCELERATION
 0.70 0.60 0.50 0.40 0.30 0.20 0.10 0.00

FREQUENCY IN HZ
 10⁰ 2 3 4 5 6 7 8 9 10¹



REF 120

1254

7 MAR 1963

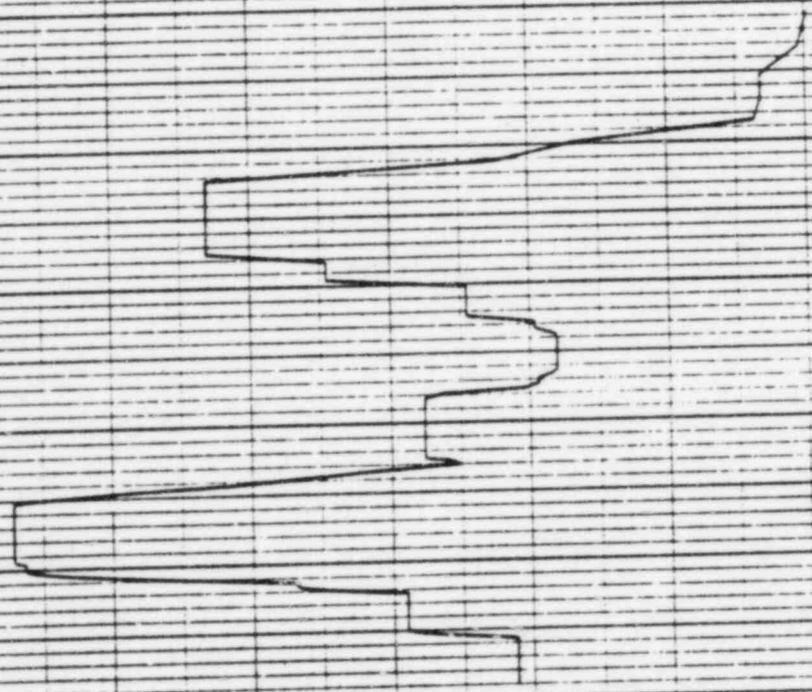
SRV
 P6PECTRA VER D1 LEV D8
 DULF STATES UTILITIES-RBS UNIT 1-CALC1221D-NMIC1-5DE-1809 REV111
 RRS DF ACC.-REACTOR BLDG.-EL-101-PP, MASS-FIL 5E15 MODEL-PSM-PEDESTAL
 PERK SPREAD 3-15Z
 DISK CURVE SE: ND-17

DAMPING VALUE = 0.020

VER. DIRECTION

ACCELERATION
 0.56
 0.48
 0.40
 0.32
 0.24
 0.16
 0.08
 0.00

FREQUENCY IN HZ
 10⁰
 2 3 4 5 6 7 8 9 10¹
 2 3 4 5 6 7 8 9 10⁰
 2 3 4 5 6 7 8 9 10¹



REF 121

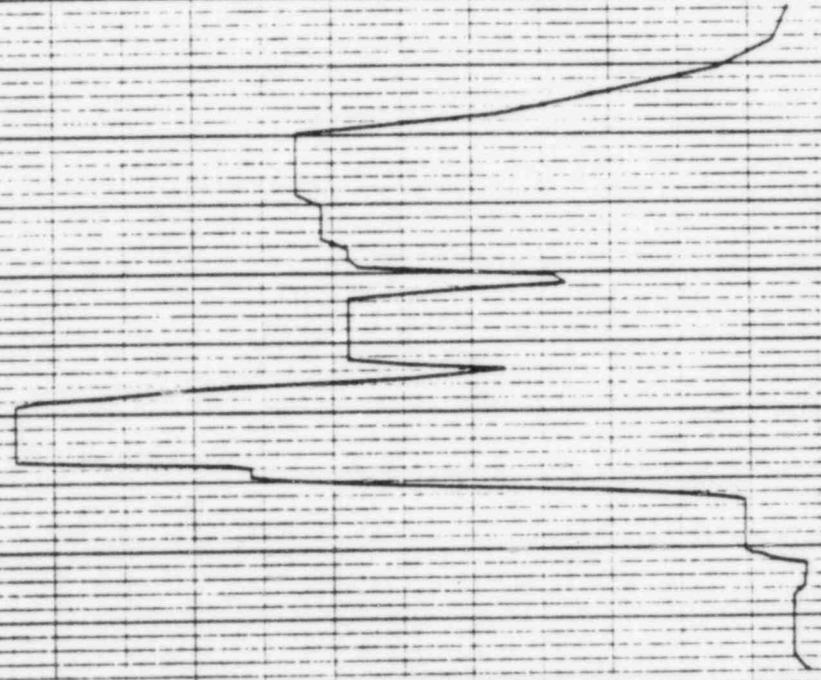
1174A

7 MAR 1981

SRV
 PEPECTRA VER DA LEV DB
 DULF STATES UTIL 11745-R86 UNIT 1-CALC 12210-NM C7-5QE-1909 REV 11
 RRS OF ACC.-REACTOR BLDG. EL-117.00, MASS-19 SEIS MODEL-PSM
 PEAK SPREAD. 9-15Z
 DISK CURVE SET NO. 18
 MOR DIRECTION
 DAMPING VALUE = 0.020

ACCELERATION G
 0.55 0.48 0.40 0.32 0.24 0.16 0.08 0.00

FREQUENCY IN HZ
 10⁰
 2 3 4 5 6 7 8 9 10¹
 2 3 4 5 6 7 8 9 10⁰
 2 3 4 5 6 7 8 9 10¹



REF 121

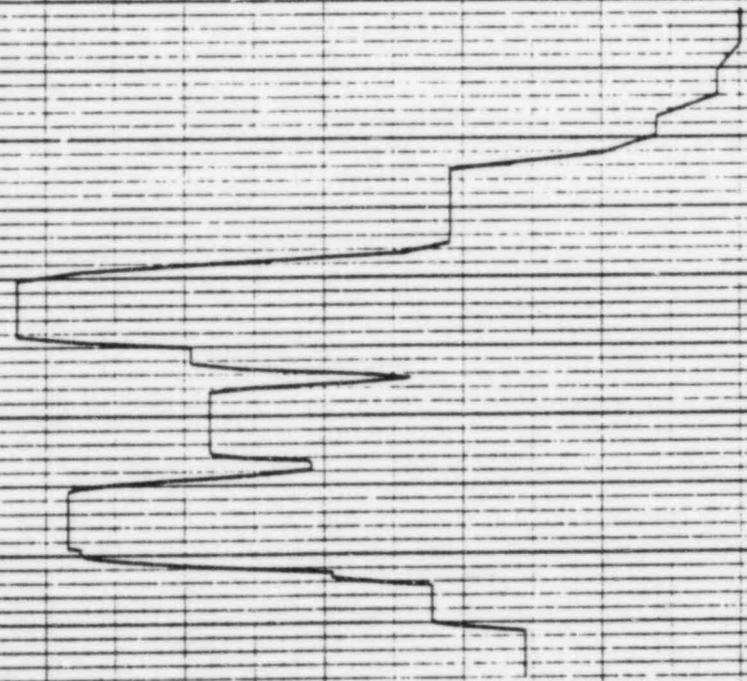
11774

7 MAR 1963

SPECTRA VER DI LEV DB
 DULF STATES UTILITIES-RBS UNIT 1-CALC12210-WHIC7-50E-1903 REV11)
 RRS OF ACC. REACTOR BLDG. .EL=117.00, MRSS=19 5E16, MODEL-PSM
 PEAK SPREAD +/-15Z
 DISK CURVE SET NO.1B
 SKV
 VER DIRECTION
 DAMPING VALUE = 0.020

ACCELERATION 0
 0.10
 0.20
 0.30
 0.40
 0.50
 0.60
 0.70

10⁶
 2
 3
 4
 5
 6
 7
 8
 9
 10⁷
 FREQUENCY IN HZ



1135A

7 MAR 1955

PEPECTRA VER D1 LEV 08
 DULF STATES UTILITIES-RB6 UNIT 1-CR1221D-MN13-5DE-190B REV113
 XRS OF ACC.-REACTOR BLDG. -EL-189.00-MASS-20 SEIS MODEL-PSM
 PEAK SPREAD +/-15Z
 DISK CURVE SET NO.18

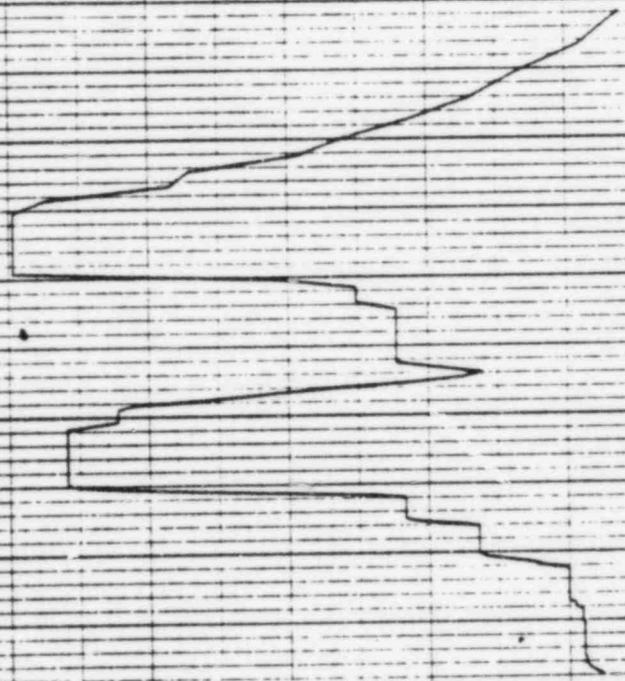
SRV

DAMPING VALUE = 0.020

HDR DIRECTION

ACCELERATION - G
 0.00 0.08 0.16 0.24 0.32 0.40 0.48 0.56

FREQUENCY IN HZ
 10⁰ 2 3 4 5 6 7 8 9 10¹
 10⁰ 2 3 4 5 6 7 8 9 10¹



49.11

1134A

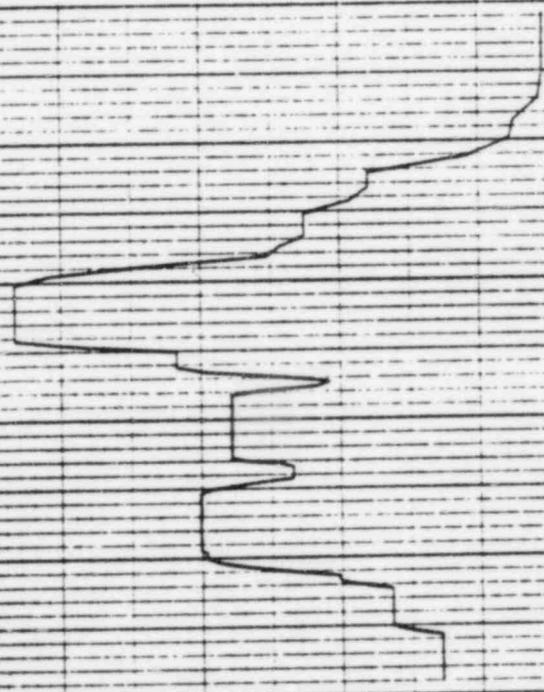
7 MAR 1985

DAMPING VALUE = 0.020

PSPECTRA VER DN LEV DB SRV
 DULF STRIES UTILITIES-RBS UNIT 1-CALC12210-NR(C)-50E-1903 REV11)
 RMS OF ACC.-REACTOR BLDG..EL=199.00, RASE=20 SE16 MODEL-PSM
 PEAK SPREAD *-15Z
 DISK CURVE SET NO.19 VER DIRECTION

ACCELERATION G
 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰
 2 3 4 5 6 7 8 9 10¹
 2 3 4 5 6 7 8 9 10²
 2 3 4 5 6 7 8 9 10³
 FREQUENCY IN HZ



7 MAR 1985

SRV

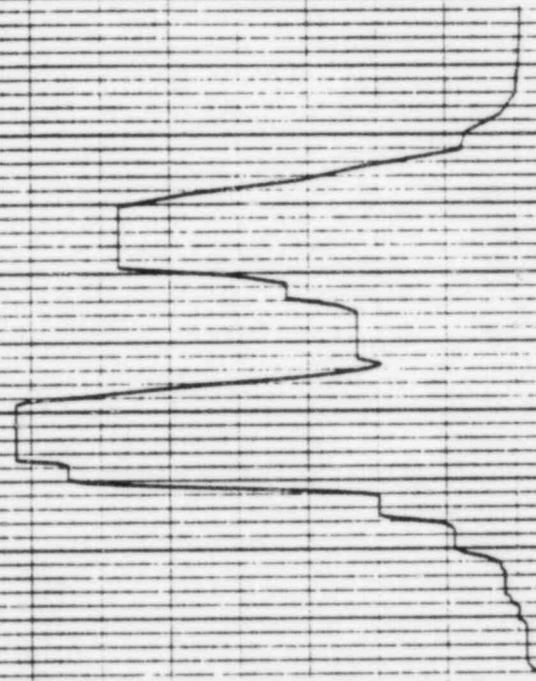
PEPECTRA VER D1 LEV DB
DULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM1C3-SDE-1985 REV117
RRS OF ACC.-REACTOR BLDG.-EL-147.00.MASS-21 SE16 MODEL-PSM
PEAK SPREAD *-15Z
DISK CURVE SET NO.20

DAMPING VALUE = 0.020

HDR DIRECT1DN

ACCELERATION 0 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ 10⁰ 2 3 4 5 6 7 8 9 10¹



7 MAR 1983

7 MAR 1983

PSPECTRA VER. 01 LEV. 08
GULF STATES UTILITIES-RBS UNIT 1-CALCIP210-NM1C1-50E-1903-REV111
RRS. OF ACC.-REACTOR BLDG.-EL=147.00, MASS=21.5E16, MODEL=PSM
PEAK SPREAD *-15Z

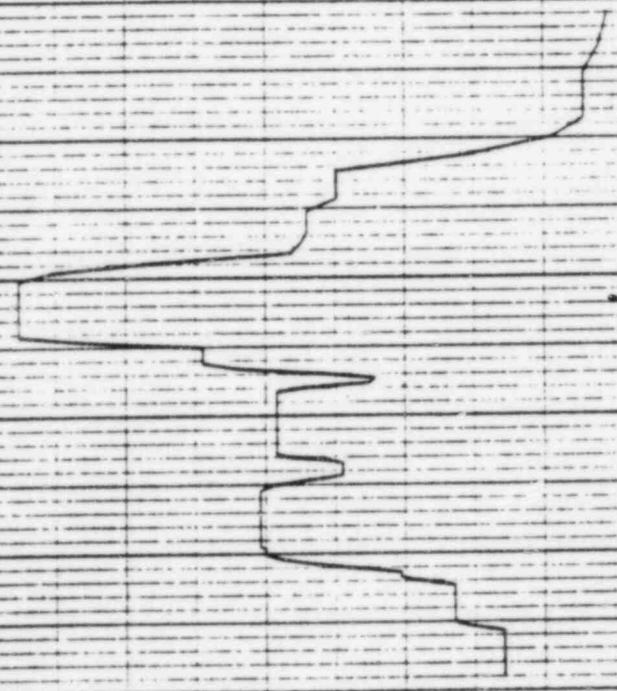
DAMPING VALUE = 0.020

VER. DIRECTION

DISK CURVE SET NO. 20

ACCELERATION 0 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰ 2 3 4 5 6 7 8 9 10¹
FREQUENCY IN HZ



REF 124

11/3/54

7 MAR 1955

DAMPING VALUE = 0.020

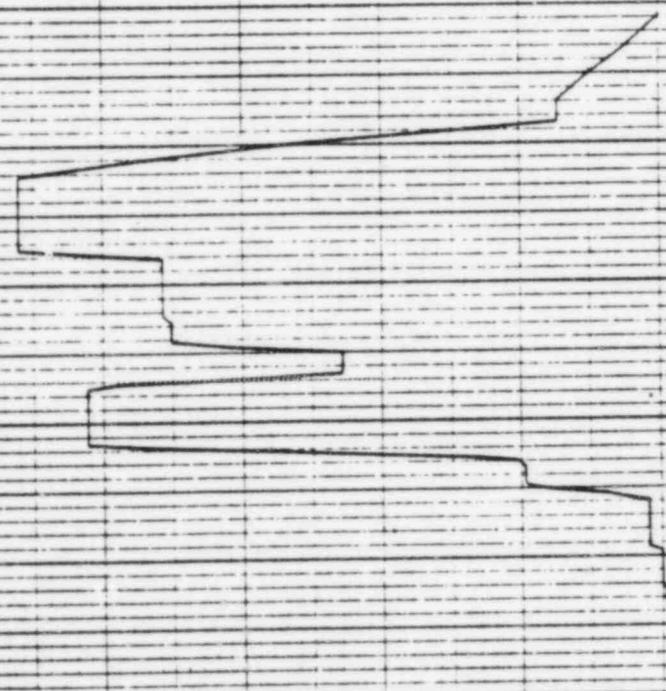
SPECTRA VER 01 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CALCIR210-MMICJ-5DE-1803 REV117
 RRS OF ACC.-REACTOR BLDG.-EL-86-D00-MR55-22 SENS MODEL-DRYWELL
 PERK SPREAD 3-15Z
 DISK CURVE SET NO. 21

NOR DIRECTION

ACCELERATION G
 0.00 0.80 1.60 2.40 3.20 4.00 4.80 5.60

10⁰ 2 3 4 5 6 7 8 9 10¹ 2 3 4 5 6 7 8 9 10² 3 4 5 6 7 8 9 10³

FREQUENCY IN HZ



REF 124

112711

7 MAR 1983

SRV

PSPECTRA VER DB LEV DB

CULF STATES UTILITIES-RB6 UNIT 1-CR1C1221D-MICD-50E-1903 REV11)
RMS DF ACC--REACTDR BLDD--EL=95.000, MASS=22.5E15 MODEL-DRYWELL
PEAK SPREAD *-15Z

DISK CURVE SET NO.21

VER DIRECTION

DAMPING VALUE = 0.020

ACCELERATION G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰ 2 3 4 5 6 7 8 9 10¹
FREQUENCY IN HZ



71111

7 MAR 1985

PSEPCIRA VER D3 LEV 08
 DOLF STATES UTILITIES-RBS UNIT 1-CALC12210-NMCI-5DE-1903 REV111
 MRS OF ACC.-REACTOR BLDG. .EL=114.00.MASS=23 SEIS MODEL-DRYWELL
 PEAK SPREAD +/-15Z
 DISK CURVE SET NO.22

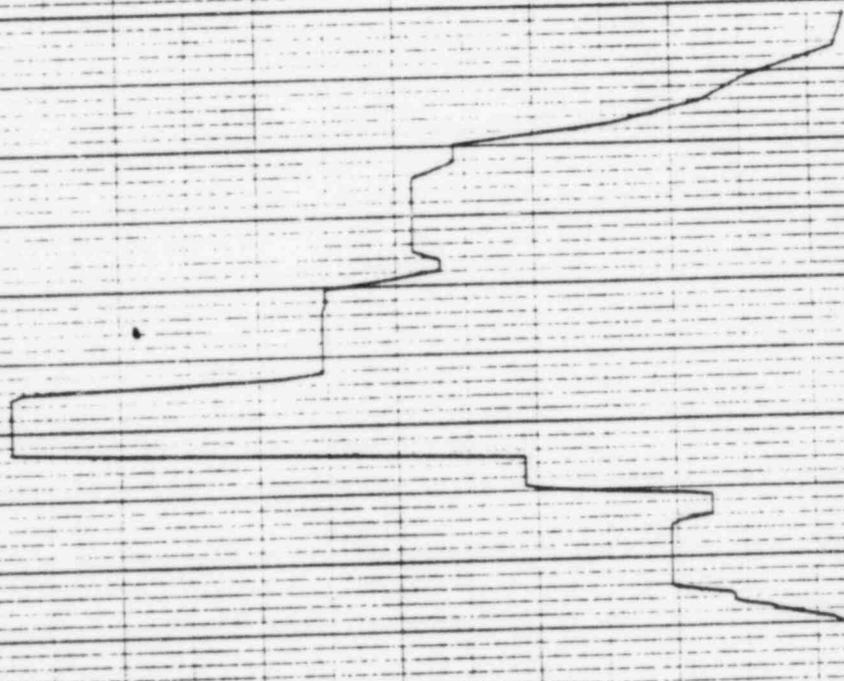
DAMPING VALUE = 0.020

SRV

HOR DIRECTION

0.00
 0.50
 1.00
 1.50
 2.00
 2.50
 3.00
 3.50
 ACCELERATION

10⁰
 2
 3
 4
 5
 6
 7
 8
 9
 10¹
 10²
 2
 3
 4
 5
 6
 7
 8
 9
 10³
 FREQUENCY IN HZ



REF 125

11/3/83

7 MAR 1983

PSPECTRA VER 00 LEV 08
GULF STRIES UTILITIES-RBS UNIT 1-CALC1221D-NM1C7-6QE-1903 REV111
RRS OF REC.-REACTOR BLDG.-EL-114.00, MASS-23 SE15, MODEL-DRYWELL
PEAK SPREAD +-15Z

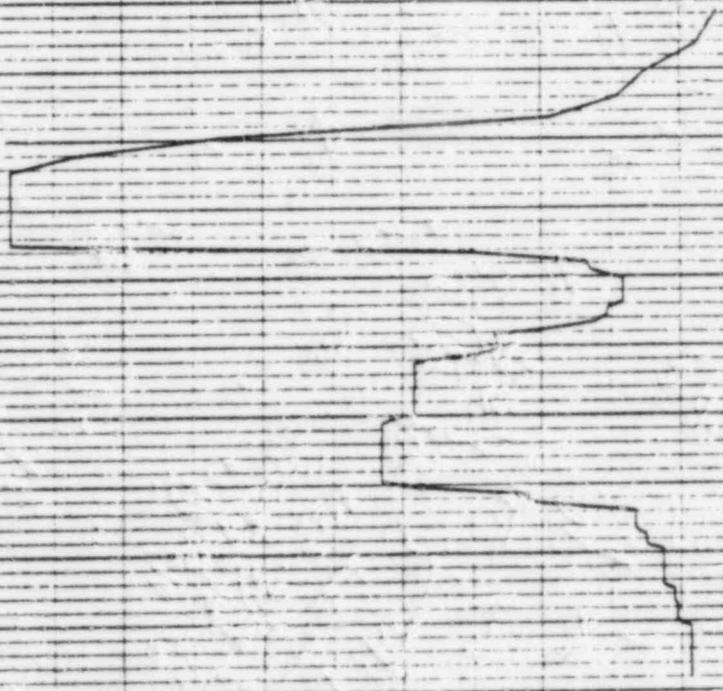
VER DIRECTION

DISK CURVE SET NO.22

DAMPING VALUE = 0.020

ACCELERATION G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ
10
2 3 4 5 6 7 8 9 10



11/11

7 MAR 1983

PEPECT'9A VER 01 LEV 08
 DULF STATES UTILITIES-RB6 UNIT 1-CALC12210-NMICJ-SDE-1803 REV113
 XRS OF ACC.-REACTOR BLDG., EL-199.00, MASS-24 5E16 MODEL-DRYWELL
 PEAK SPREAD ±.15Z
 DISK CURVE SET NO.23

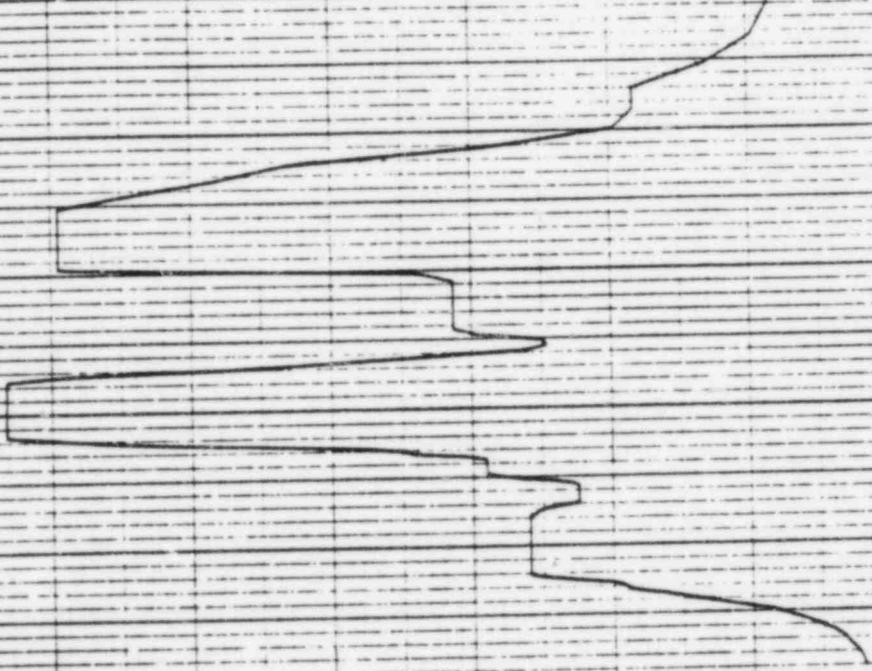
DAMPING VALUE = 0.020

HDR DIRECTION

SRV

ACCELERATION 0 0.80 1.60 2.00 2.40 2.80

10⁰ 2 3 4 5 6 7 8 9 10¹
 FREQUENCY IN HZ



10⁰

REF 126

1177

7 MAR 1988

DAMPING VALUE = 0.020

SRV

SPECTRA VER DI LEV DB

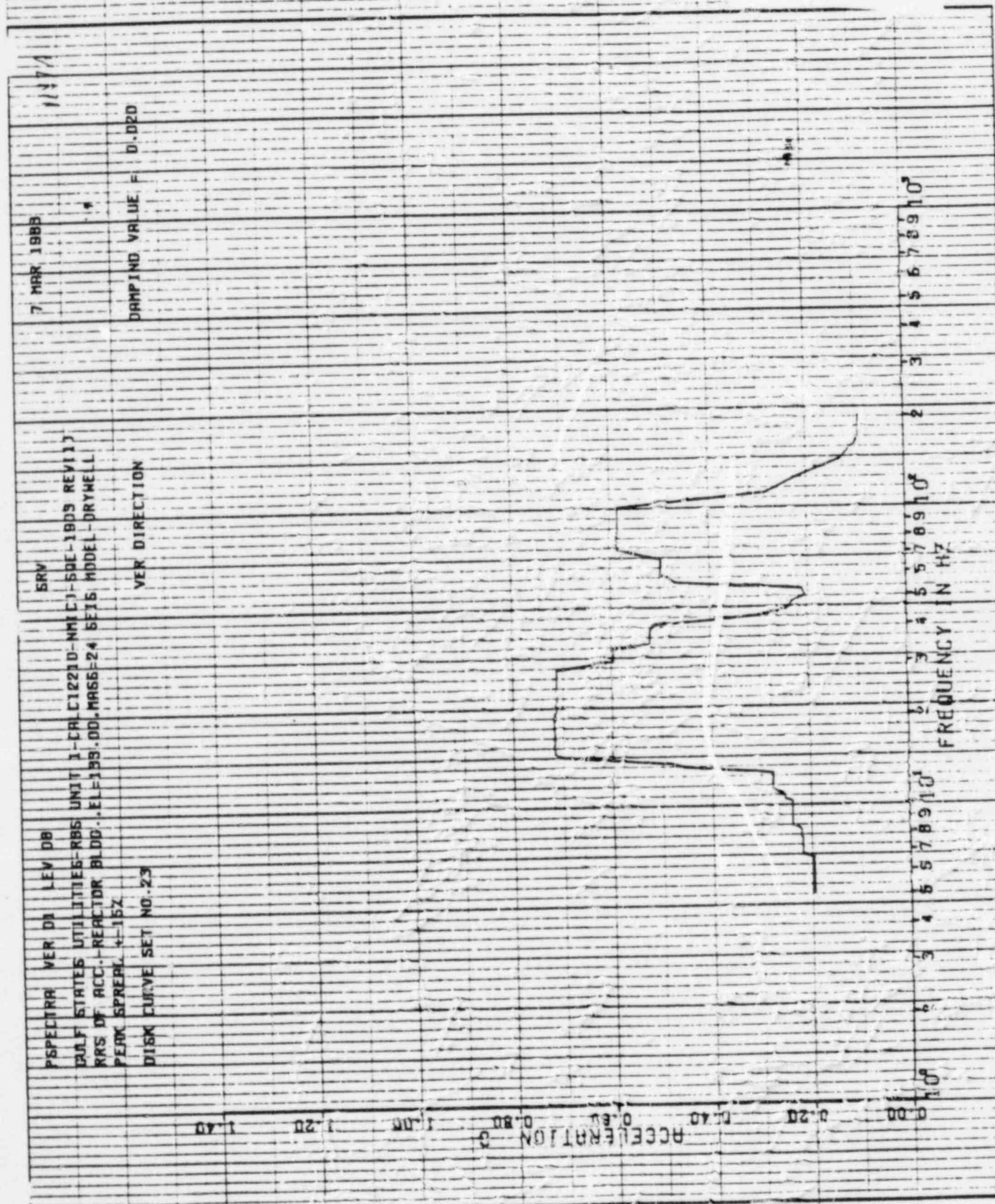
DAUF STATES UTILITIES-RBS UNIT 1-CALC12210-NMCI-50E-18DS REV11)
RBS OF ACC.-REACTOR BLDG. .EL.=199.00. MASS=24 5E15. MODEL-DRYWELL
PERK SPREAR. 4-15Z

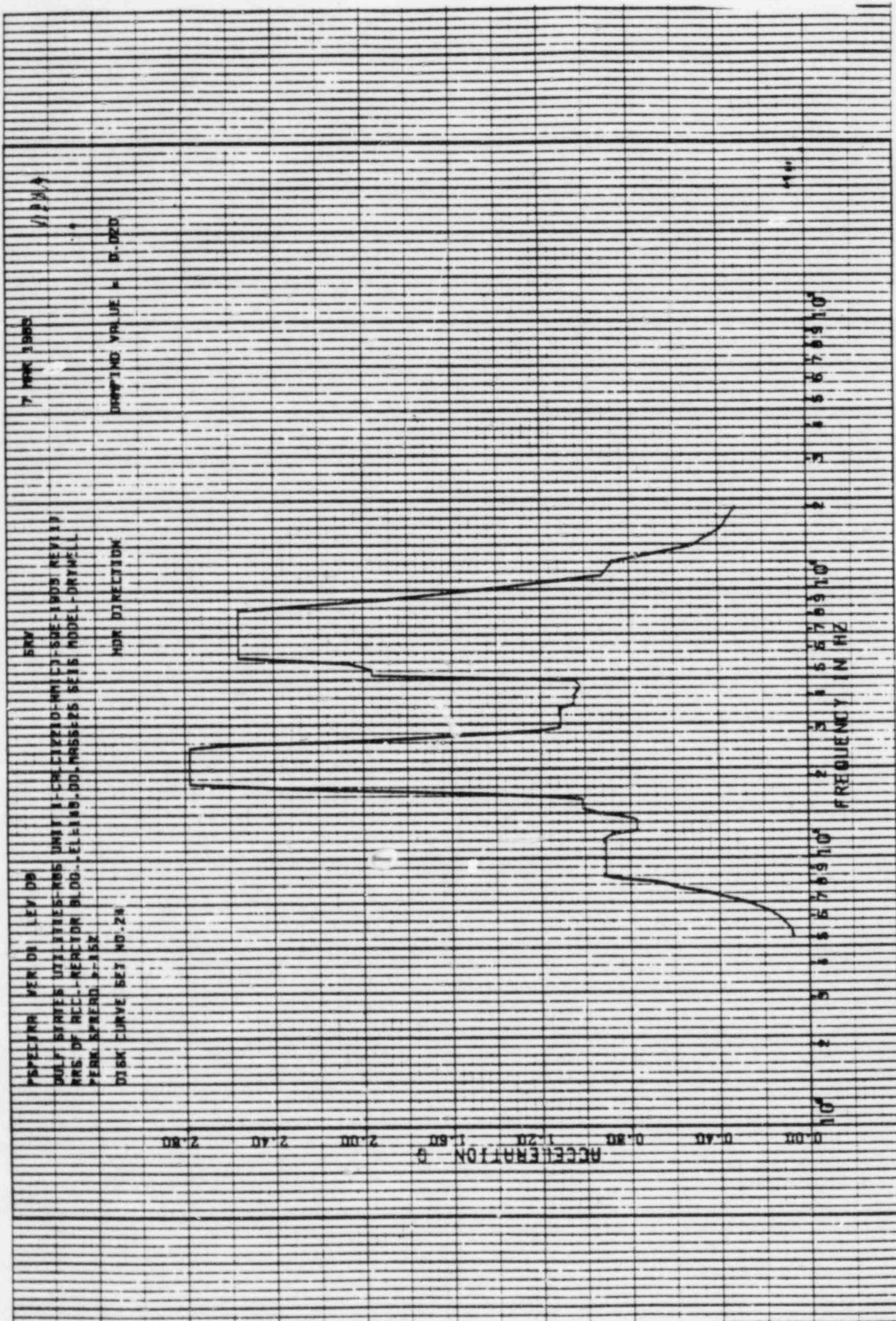
VER DIRECTION

DISK CURVE SET NO. 23

ACCELERATION 0.80 0.60 0.40 0.20 0.00
1.40 1.20 1.00

FREQUENCY IN HZ
10⁰
3 4 5 5.78910¹
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100





POPULATION PER DISK LEV DB
 DULF STATES UTILITIES-RMS UNIT 1-CRACKED-NOT-CO-SDE-1-ND3 REV 17
 RMS OF REC-REACTOR BLDG-LE-1-IND-DO-MASS-PS SETS MODEL-DRYWELL
 PENN. SPREAD 2-1-58
 NO. 01 REACTION
 DISK CURVE SET NO. 21

1/20/65

DRAWING VALUE = 0.020

1/20/65

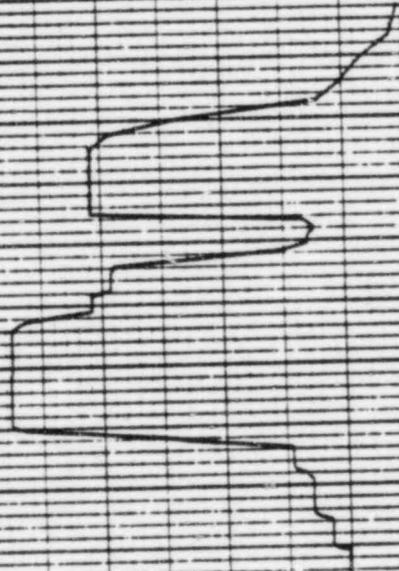
REF 127

7 MAR 1955

PAPERION VER DR LEV DB
 DAILY STRIKE UTILITIES-RBS UNIT 1-CR-122-D-MILCS-8DE-1955 REV 119
 RRS OF ACC--RECTOR BLDG. EL-118-D0, MASS 25 SE 15 MODEL-DRYWELL
 PEAK SPEED #15Z
 DISK CURVE SET NO. 24
 VIB DIRECTION
 DAMPING VALUE # 0.020

REEF STRATION
 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

10⁰
 2 3 4 5 6 7 8 9 10
 FREQUENCY IN HZ



REF 128

1/13/68

7 MAR 1968

SRV

PSPECTRA VER 03 LEV 08

DULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM(C)-SDE-1903 REV11)
RBS OF ACC.-REACTOR B.G..EL=152.DD.MASS=26 5E16 MODEL-DRYWELL
PERK SPREAD +-15Z

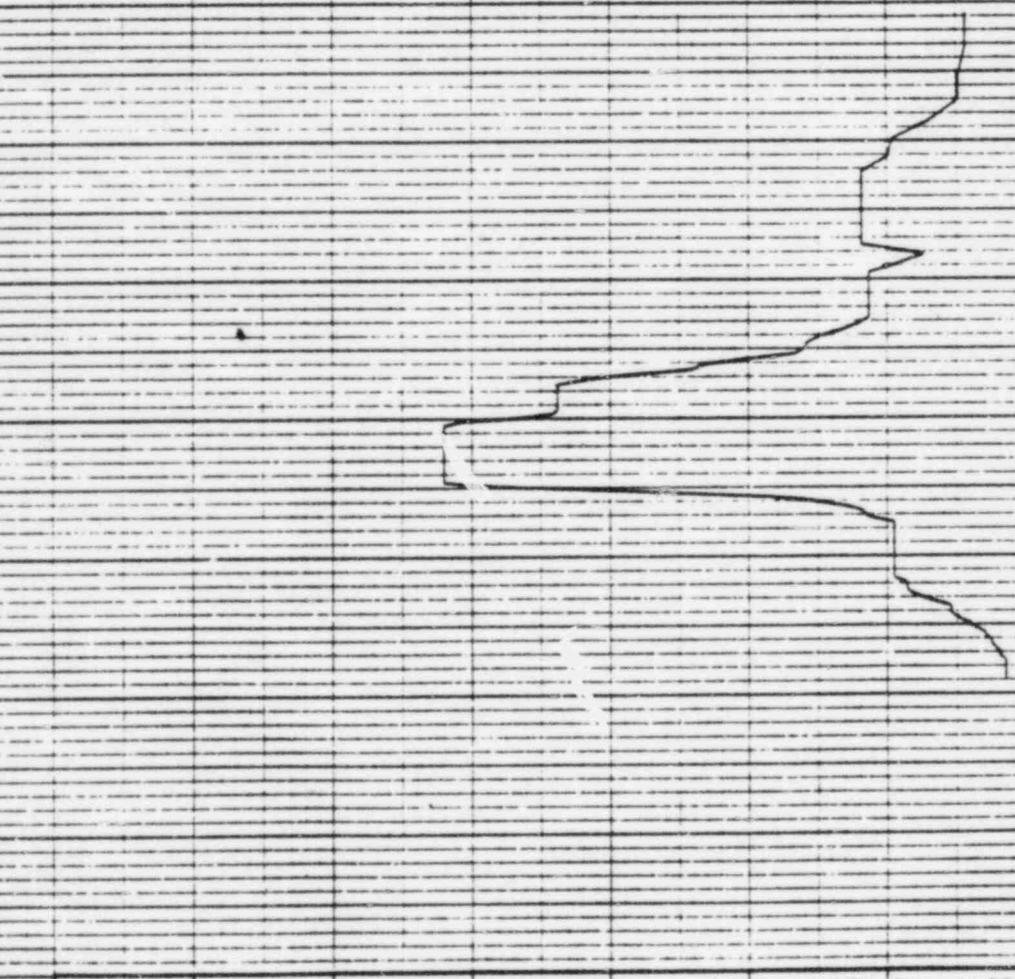
DISK CURVE SET NO.25

HOR DIRECTION

DAMPING VALUE = 0.020

ACCELERATION 0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80

FREQUENCY IN HZ 10⁰ 2 3 4 5 6 7 8 9 10¹



REF 128

W-104

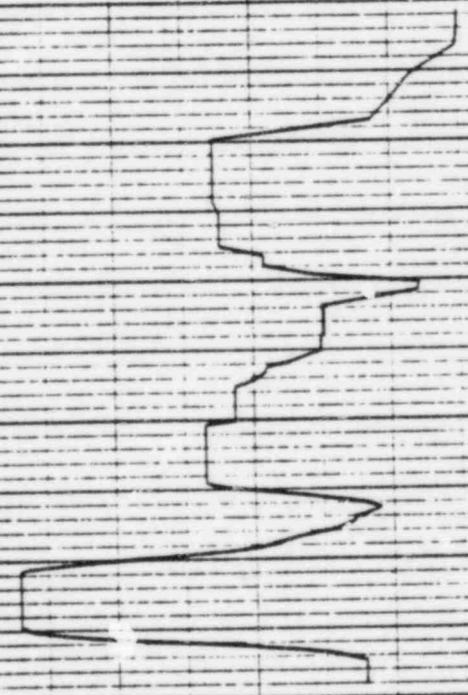
7 MAR 1983

DAMPING VALUE = 0.020

SRV
 VER DIR
 LEV 08
 *SPECTRA
 DULF STARTS UTILITIES-RBS UNIV 1-CR122101-AMICJ-SNE-1903 REV11J
 RRS OF ACC.-REACTOR BLDG., ELL-162.00, MASS-26 SETS MODEL-DRYWELL
 PERK SPREAD, -15Z
 DISK CURVE SET NO.25
 VER DIRECTION

ACCELERATION G
 0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80

FREQUENCY IN HZ
 10⁰ 2 3 4 5 6 7 8 9 10¹



1170A

7 MAR 1965

DAMPING VALUE = 0.020

SRV

SPECTRA VER DA LEV DB

GULF STATES UTILITIES-RBF UNIT 1-CALC12210-NM1C7-SQE-1905 REV11J
RRS OF ACC.-REACTOR BLDG.-EL-185.00-MASS-27 SETS MODEL-DRYWELL
PEAK SPREAD +/-15Z

DISK CURVE SET NO.26

HDR DIRECTION

ACCELERATION 0 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ 10⁰ 2 3 4 5 6 7 8 9 10¹



1143A

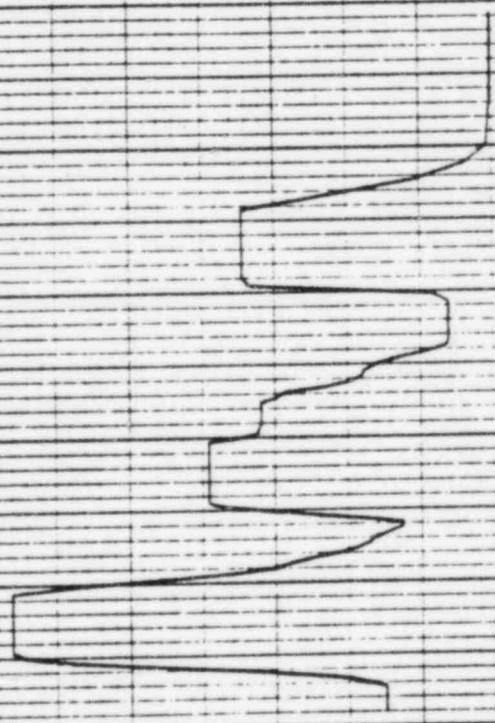
7 MAR 1983

SPECTRA VER DI LEV DB
 GULF STATES UTILITIES-RBS UNIT 3-CALC 12210-NMICH-SDE-1803 REV 113
 RRS OF ACC.-REACTOR BLDG.-EL-185.DD.MASS-27 SEIF MODEL-DRYWELL
 PERK SPREAD +/-15Z
 DISK CURVE SET NO.25
 SRV
 VER. DIRECTION

DAMPING VALUE = 0.020

ACCELERATION G
 0.00 0.40 0.80 1.20 1.50 2.00 2.40 2.80

10⁰
 2 3 4 5 6 7 8 9 10¹
 2 3 4 5 6 7 8 9 10²
 2 3 4 5 6 7 8 9 10³
 FREQUENCY IN HZ



114711

7 MAR 1983

PGPECTRA VER. 01 LEY 08
 DULF STATES UTILITIES-RB6 UNIT 1-CALC1210-NM(C)-5DE-1903 REV 110
 RRS OF ACC.-REACTOR BLDG.-EL=119.46, MASS=28 SE16, MODEL-RPV
 PEAK SPREAD 3-15Z
 DISK CURVE SET NO.28

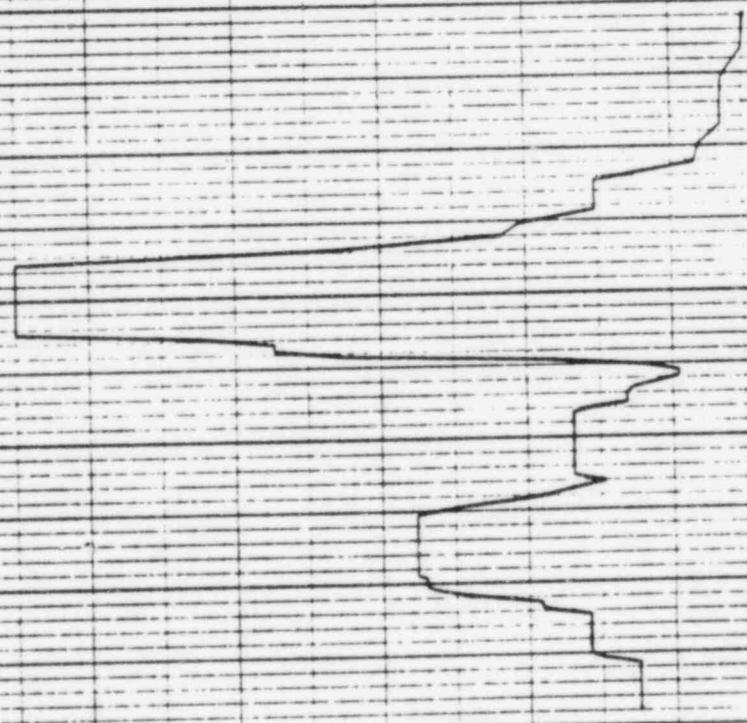
SRV

DAMPING VALUE = 0.020

VER. DIRECTION

ACCELERATION G
 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ
 10⁰ 2 3 4 5 6 7 8 9 10¹
 10⁰ 2 3 4 5 6 7 8 9 10¹
 10⁰ 2 3 4 5 6 7 8 9 10¹



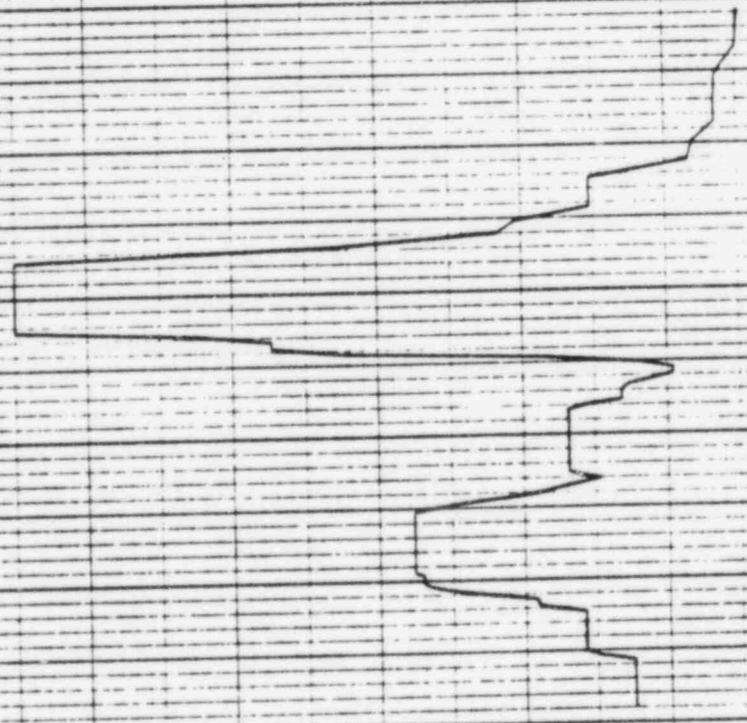
117 217

7 MAR 1963

PGPECTRA VER 01 LEV 08
 DULF STATES UTILITIES-RB6 UNIT 1-CALC12210-MM1C1-60E-1903 REV11D
 MRS OF ACC.-REACTOR BLDD.-EL=119.46, MASS=29 6E16, MODEL-RPV
 PERK SPREAD 3-15Z
 DISK CURVE SET NO. 28
 VER DIRECTION
 DAMPING VALUE = 0.020

ACCELERATION G
 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ
 10⁰ 2 3 4 5 6 7 8 9 10¹



4 PM 7

7 MAR 1985

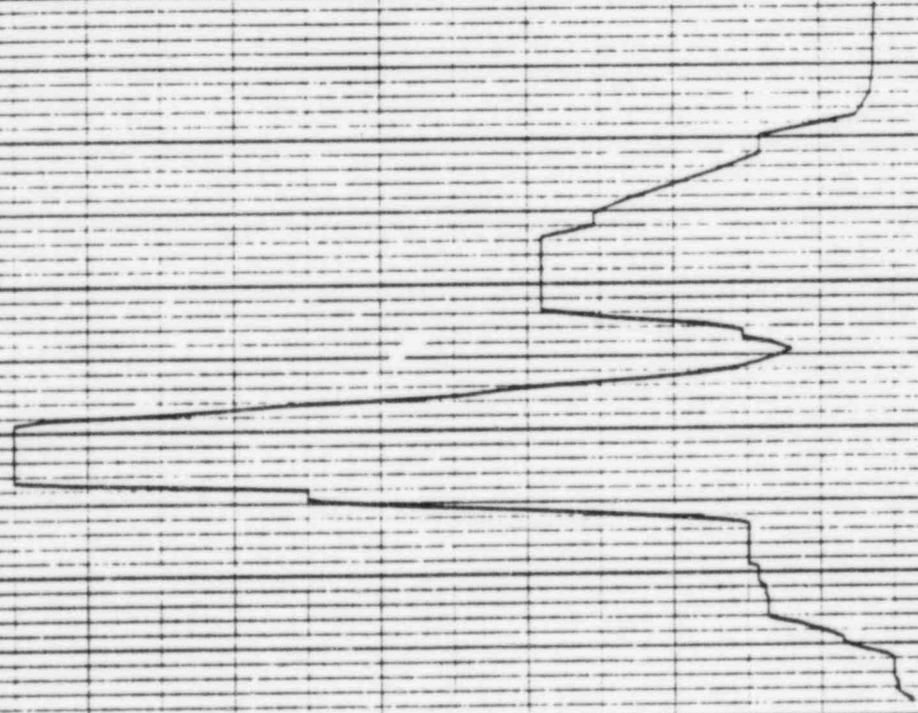
DAMPING VALUE = 0.020

PSPECTRA VER 01 LEV 08
 DULF STATES UTILITIES-RB5 UNIT 1-CALC 12210-NM1C7-5DE-1909 REV 1.0
 XRS DF ACC.-REACTOR BLDG.-ELF-162.57, MR55-3D 5E15 MDEL-RPV
 PERK SPREAD +/-15Z
 DISK CURVE SET NO.29

SRV
 HOR DIRECTION

ACCELERATION G

FREQUENCY IN HZ

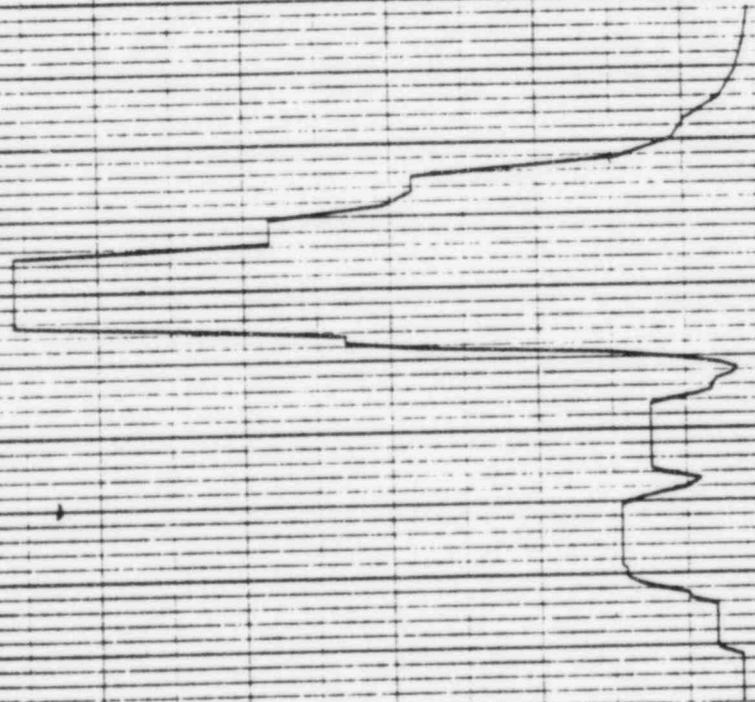


7 MAR 1983

PSPECTRA VER DI LEV DB
 GULF STATES UTILITIES-RBS UNIT 1-CALC1221D-NM1C7-5QE-1903 REV111
 NRS OF ACC-REACTOR BLDG-EL-162.57, MRFE-3D SE15 MODEL-RPV
 PEAK SPREAD *15Z
 DISK CURVE SET NO.29
 SRV
 VER DIRECTION
 DAMPING VALUE = 0.020

ACCELERATION
 0.00
 0.40
 0.80
 1.20
 1.60
 2.00
 2.40
 2.80

10⁰
 2
 3
 4
 5
 6
 7
 8
 9
 10¹
 2
 3
 4
 5
 6
 7
 8
 9
 10²
 2
 3
 4
 5
 6
 7
 8
 9
 10³
 FREQUENCY IN HZ



REF 132

7 MAR 1985

SRV

PSPECTRA VER D01 LEV DB
GULF STATES UTILITIES-RBS UNIT 3-CALC12210-NM1C1-50E-1803 REV111
RMS OF ACC.-REACTOR BLDG..EL=117.63,MRSS=91+92 SEIS MODEL-RPVI INTD
PEAK SPREAD *-15Z

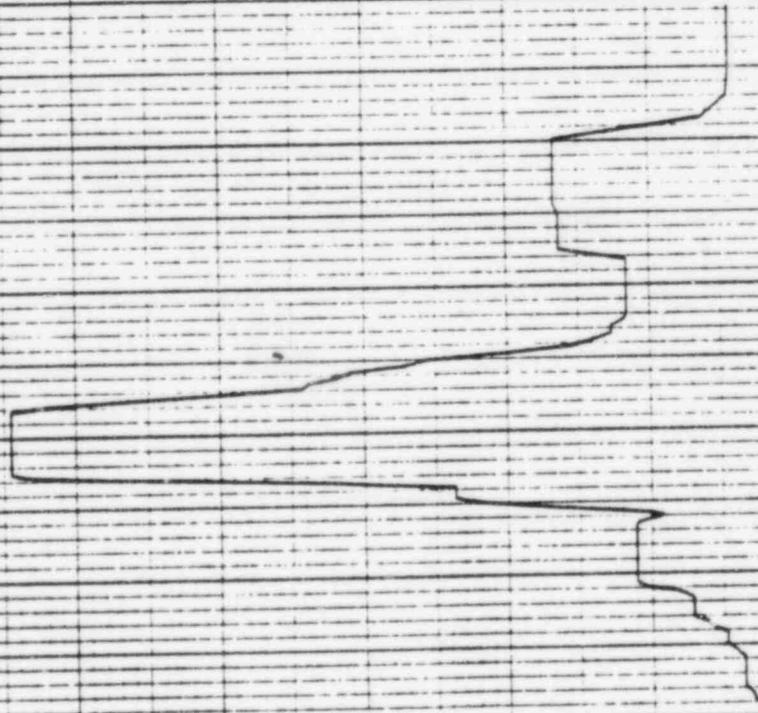
DAMPING VALUE = 0.020

NOR DIRECTION

DISK CURVE SET NO.30

ACCELERATION G
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40

FREQUENCY IN HZ
10⁰ 2 3 4 5 6 7 8 9 10¹



7 MAR 1965

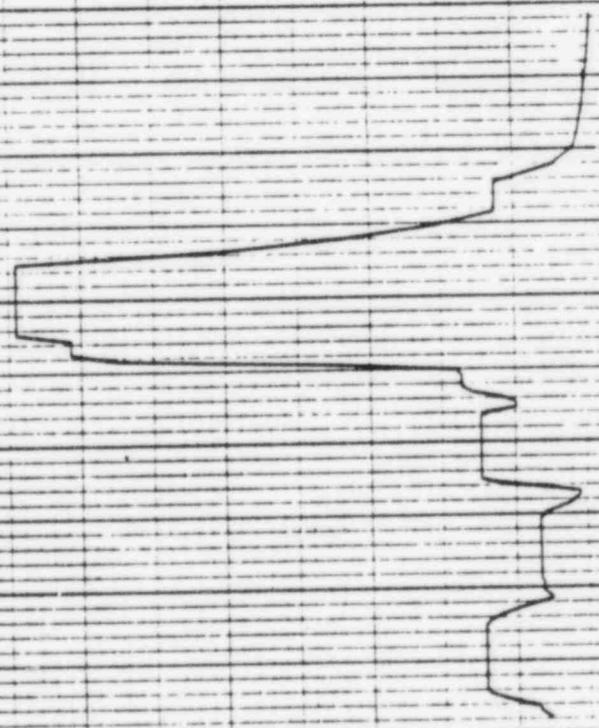
SRV
CALIF STATES UTILITIES-RBS UNIT 1-CALC1221D-NM1C7-SDE-1903 REV113
RRS OF ACC.-REACTOR BLDG..EL-117.63.MASS-31+32 SE15 MODEL-RPVIINTD
PEAK SPREAD 7-15Z
DISK CURVE SET NO.30
VER DIR:RELTDN

DAMPING VALUE = 0.020

REF 132

ACCELERATION 0 0.80 1.60 2.40 3.20 4.00 4.80 5.60

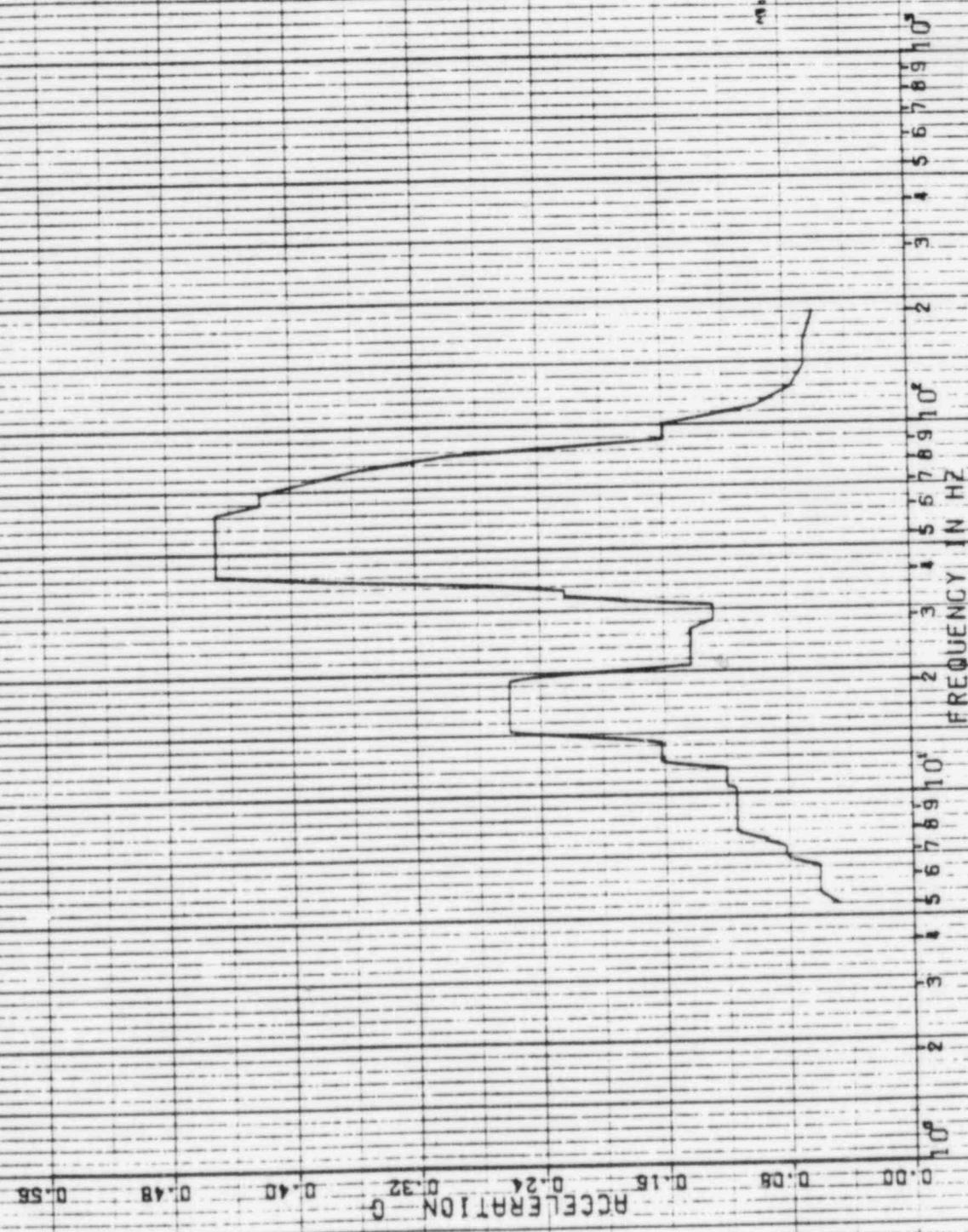
FREQUENCY IN HZ 2 3 4 5 6 7 8 9 10¹ 10² 10³ 10⁴



REF 133

7 MAR 1955

SRV
 PSPECTRA VER D1 LEV 08
 DULF STATES UTILITIES-RBS UNIV 1-CALC12210-NM17-50E-1909 REV11)
 RRS OF ACC.-REACTOR BLDG.-EL-198-09, RRS5-99 SEIS MODEL-RPV
 PEAK SPREAD. +-15Z
 DISK CURVE SET NO.31
 HOR DIRECTION
 DRAMPING VALUE = 0.020



6603A

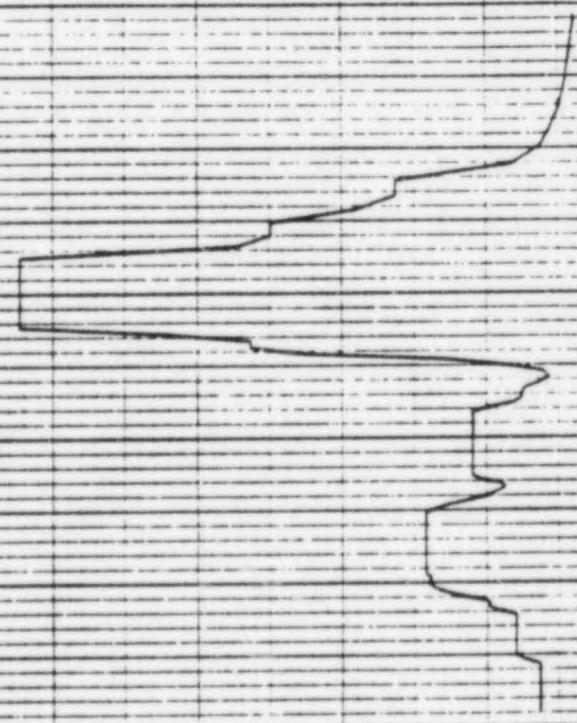
7 MAR 1965

DAMPING VALUE = 0.020

PSPECTRA VER D1 LEV DB SRV
 GULF STATES UTILITIES-RB5 UNIT 1-CALC12210-MNICJ1-6DE-18D9 REV117
 RRS OF ACC.-REFLECTOR BLDG.-EL=186.09,MRSS=93 5E16 MODEL-RPV
 PERK SPREAD 4-15Z
 DISK CURVE SET NO.31
 VER DIRECTION

ACCELERATION G
 0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80

10⁰
 2 3 4 5 6 7 8 9 10¹
 FREQUENCY IN HZ
 2 3 4 5 6 7 8 9 10²
 3 4 5 6 7 8 9 10³



REF 134

7 MAR 1985

PSPECTRA VER 01 LEV 08
 GULF STATES UTILITIES-RB5 UNIT 1-CALC12210-NM(C)-SQE-1908 REV11D
 .R6 OF ACC.-REACTOR BLDG.-EL=91.25D. WEIR WALL
 PERK. SPREAD Y-15Z
 D16K CURVE SET NO.33
 SRV
 HDR DIRECTION:

DAMPING VALUE = 0.020

ACCELERATION 0 2.00 4.00 6.00 8.00 10.00 12.00 14.00

FREQUENCY IN HZ 10⁰ 2 3 4 5 6 7 8 9 10¹



REF 134

12413

7 MAR 1988

DAMPING VALUE = 0.020

SRV
 VER DIRECTION
 DISK CURVE SET NO. 59
 PEAK SPREAD +/- 15Z
 RRS OF ACC. - REACTOR BLDG. - EL-91-250, WEIR WALL
 1-CR/C12210-NM/CJ-5DE-1808 REV 1.0
 GULF STATES UTILITIES-RBS UNIT
 VER DB
 LEV DB
 PSPECTRA

ACCELERATION G
 0.00
 0.20
 0.40
 0.60
 0.80
 1.00
 1.20
 1.40

FREQUENCY IN HZ
 10⁰
 2
 3
 4
 5
 6
 7
 8
 9
 10¹

