

SEISMIC/HYDRODYNAMIC UPSET AND FAULTED
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

C4/12210/124/4Y

B407160180 B40709
PDR ADOCK 0500045B
A PDR

TABLE OF CONTENTS

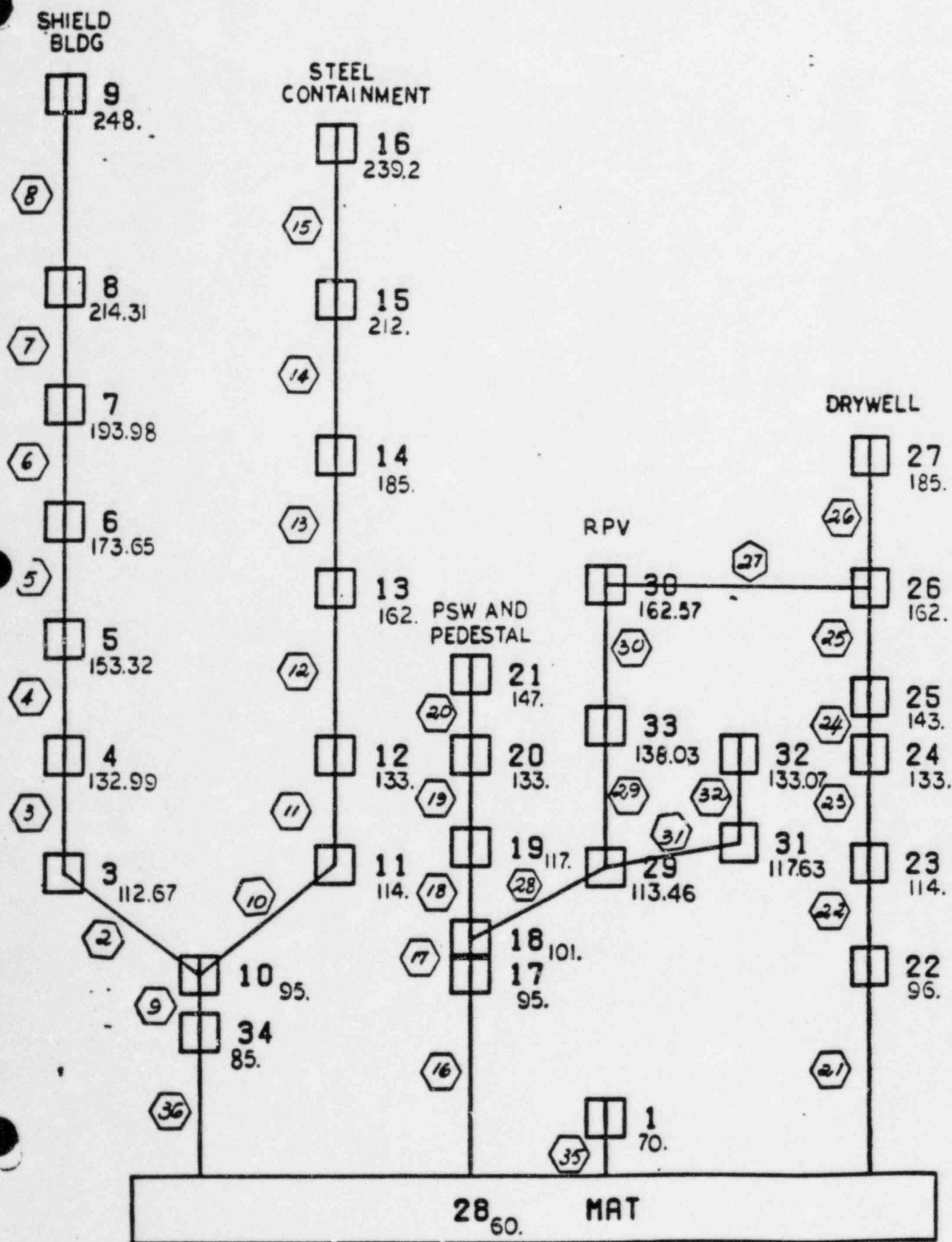
REQUIRED RESPONSE SPECTRA (RRS)

<u>Mass Point - Location</u>	<u>Elevation (ft)</u>	<u>Reference No.*</u>
28 - Mat	60.00	35
1 - Top of Mat	70.00	36
3 - Shield Building	112.67	37
4 -	132.99	38
5 -	153.32	39
6 -	173.65	40
7 -	193.98	41
8 -	214.31	42
9 -	248.00	43
10 - Comp. Shield Building	95.00	44
34 -	85.00	45
11 - Steel Containment	114.00	46
12 -	133.00	47
13 -	162.00	48
14 -	185.00	49
15 -	212.00	50
16 -	239.20	51
17 - PSW Pedestal	95.00	52
18 -	101.00	53
19 - Primary Shield Wall (PSW)	117.00	54
20 -	133.00	55
21 -	147.00	56
22 - Drywell	96.00	57
23 -	114.00	58
24 -	133.00	59
25 -	143.00	60
26 -	162.00	61
27 -	185.00	62
29 - RPV	113.46	63
30 -	162.57	64
31 - RPV (Internal)	117.63	65
32 -	133.07	66
33 - RPV	138.03	67
None - Weir Wall	91.25	68

*Each reference number includes:

1. Horizontal and vertical direction UPSET condition at 2 percent damping.
2. Horizontal and vertical direction FAULTED condition at 2, 3, and 4 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



714

9 FEB 1963

S. RAY

DAMPING VALUE = 0.020

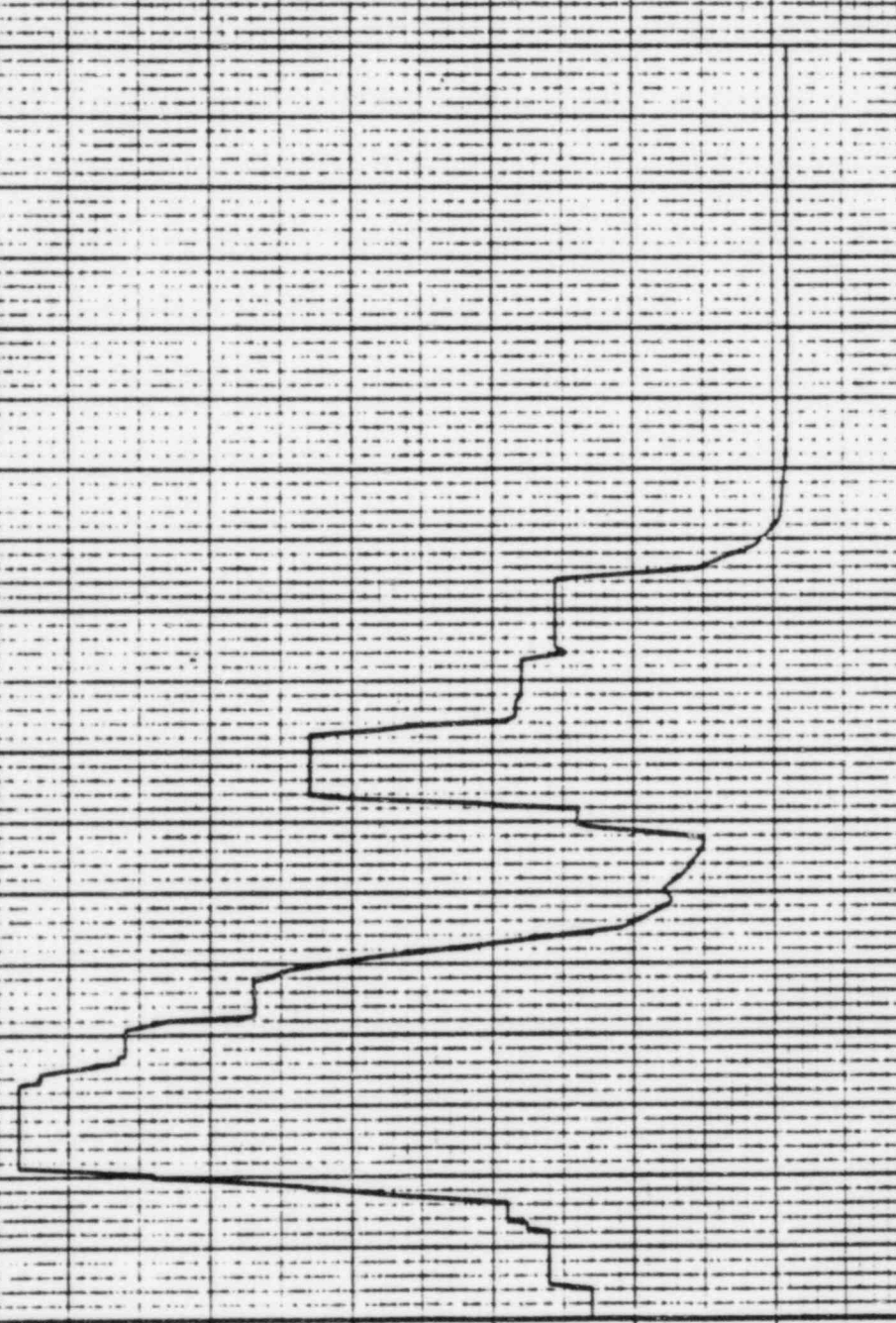
PSPECTRA VER 01 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM C1-SOE-1963 REV11
 MRS. OF ACC.-REACTOR BLDG.-EL-60.000, MASS-28 SEIS MODEL - MAT
 PEAK SPREAD -20% ± 25% SEISMIC. ± 15% HYDRODYNAMIC

HOR DIRECTION

DISK CURVE SET NO. 27
 NOTE: BASE OF OBS (SENSITIVITY 2V/16V.SAVCO), DELT'S 8-12210-791.136-124-0-120-129-1.120-141-03

ACCELERATION G

FREQUENCY IN HZ



778A

9 FEB 1983

A. KAT

DRAFTING VALUE = 0.070

UPSET CONDITION

GULF STATES UTILITIES-RBS UNIT 1-COAL 12210-MA(CI-SQE-1983 REV11)
DRS OF ACC-REACTOR BLDG. EL=60.000 MASS=28.5E5 MODEL-RAT
PEAK SPREAD -201.4257 SEISMIC. -15Z HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO.27

NOTE: 8866 OF ONE ENVIRONMENT 2Y (8V. 8AVCB), CALC 18-38810-
201.130-174-0.180-129-1, 120-141-03

ACCELERATION G

FREQUENCY IN HZ

5678910

2

3

4

5

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

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

9 FEB 1985

10:54 P

K. KRY

DAMPING VALUE = 0.040

FRUITED CONDITION

PROPELLOR VER 01 LEV 08
D&F STATES UTILITIES-RBS UN07 11-CLC12210-MNIC7-SDE-1805 REVIND
KOS OF ACC.-REACTOR BLDG.-E1-50.000.MASS-28 SEIS MODEL- NRY
PEAK SPREAD -20Z.-25Z SEISMIC.-15Z HYDRODYNAMIC

DISK CURVE SET NO. 27

NOTE: MASS OF ASE>ENVISBIV.24.18V.SRYC67-ENVICMID.28.MS.MF.1.CALC.812218-
201.11196.128-d.128-128-1.120-121-d.120-087.1.120-138-9.120-084-113

2.80

2.40

2.00

1.60

1.20

0.80

0.40

0.00

ACCELERATION

10⁰

10¹

10²

10³

10⁴

10⁵

10⁶

10⁷

10⁸

10⁹

10¹⁰

10¹¹

10¹²

10¹³

10¹⁴

10¹⁵

10¹⁶

10¹⁷

10¹⁸

10¹⁹

10²⁰

10²¹

10²²

10²³

10²⁴

10²⁵

10²⁶

10²⁷

10²⁸

10²⁹

10³⁰

10³¹

10³²

10³³

10³⁴

10³⁵

10³⁶

10³⁷

10³⁸

10³⁹

10⁴⁰

10⁴¹

10⁴²

10⁴³

10⁴⁴

10⁴⁵

10⁴⁶

10⁴⁷

10⁴⁸

10⁴⁹

10⁵⁰

10⁵¹

10⁵²

10⁵³

10⁵⁴

10⁵⁵

10⁵⁶

10⁵⁷

10⁵⁸

10⁵⁹

10⁶⁰

10⁶¹

10⁶²

10⁶³

10⁶⁴

10⁶⁵

10⁶⁶

10⁶⁷

10⁶⁸

10⁶⁹

10⁷⁰

10⁷¹

10⁷²

10⁷³

10⁷⁴

10⁷⁵

10⁷⁶

10⁷⁷

10⁷⁸

10⁷⁹

10⁸⁰

10⁸¹

10⁸²

10⁸³

10⁸⁴

10⁸⁵

10⁸⁶

10⁸⁷

10⁸⁸

10⁸⁹

10⁹⁰

10⁹¹

10⁹²

10⁹³

10⁹⁴

10⁹⁵

10⁹⁶

10⁹⁷

10⁹⁸

10⁹⁹

10¹⁰⁰

10¹⁰¹

10¹⁰²

10¹⁰³

10¹⁰⁴

10¹⁰⁵

10¹⁰⁶

10¹⁰⁷

10¹⁰⁸

10¹⁰⁹

10¹¹⁰

10¹¹¹

10¹¹²

10¹¹³

10¹¹⁴

10¹¹⁵

10¹¹⁶

10¹¹⁷

10¹¹⁸

10¹¹⁹

10¹²⁰

10¹²¹

10¹²²

10¹²³

10¹²⁴

10¹²⁵

10¹²⁶

10¹²⁷

10¹²⁸

10¹²⁹

10¹³⁰

10¹³¹

10¹³²

10¹³³

10¹³⁴

10¹³⁵

10¹³⁶

10¹³⁷

10¹³⁸

10¹³⁹

10¹⁴⁰

10¹⁴¹

10¹⁴²

10¹⁴³

10¹⁴⁴

10¹⁴⁵

10¹⁴⁶

10¹⁴⁷

10¹⁴⁸

10¹⁴⁹

10¹⁵⁰

10¹⁵¹

10¹⁵²

10¹⁵³

10¹⁵⁴

10¹⁵⁵

10¹⁵⁶

10¹⁵⁷

10¹⁵⁸

10¹⁵⁹

10¹⁶⁰

10¹⁶¹

10¹⁶²

10¹⁶³

10¹⁶⁴

10¹⁶⁵

10¹⁶⁶

10¹⁶⁷

10¹⁶⁸

10¹⁶⁹

10¹⁷⁰

10¹⁷¹

10¹⁷²

10¹⁷³

10¹⁷⁴

10¹⁷⁵

10¹⁷⁶

10¹⁷⁷

10¹⁷⁸

10¹⁷⁹

10¹⁸⁰

10¹⁸¹

10¹⁸²

10¹⁸³

10¹⁸⁴

10¹⁸⁵

10¹⁸⁶

10¹⁸⁷

10¹⁸⁸

10¹⁸⁹

10¹⁹⁰

10¹⁹¹

10¹⁹²

10¹⁹³

10¹⁹⁴

10¹⁹⁵

10¹⁹⁶

10¹⁹⁷

10¹⁹⁸

10¹⁹⁹

10²⁰⁰

10²⁰¹

10²⁰²

10²⁰³

10²⁰⁴

10²⁰⁵

10²⁰⁶

10²⁰⁷

10²⁰⁸

10²⁰⁹

10²¹⁰

10²¹¹

10²¹²

10²¹³

10²¹⁴

10²¹⁵

10²¹⁶

10²¹⁷

10²¹⁸

10²¹⁹

10²²⁰

10²²¹

10²²²

10²²³

10²²⁴

10²²⁵

10²²⁶

10²²⁷

10²²⁸

10²²⁹

10²³⁰

10²³¹

10²³²

10²³³

10²³⁴

10²³⁵

10²³⁶

10²³⁷

10²³⁸

10²³⁹

10²⁴⁰

10²⁴¹

10²⁴²

10²⁴³

10²⁴⁴

10²⁴⁵

10²⁴⁶

10²⁴⁷

10²⁴⁸

10²⁴⁹

10²⁵⁰

10²⁵¹

10²⁵²

10²⁵³

10²⁵⁴

10²⁵⁵

10²⁵⁶

10²⁵⁷

10²⁵⁸

10²⁵⁹

10²⁶⁰

10²⁶¹

10²⁶²

188 A

9 FEB 1983

K. KRY

DAMPING VALUE = 0.020

PSPECTRA VER. D1 LEV DB UPSET CONDITION

DUAL STATES UTILITIES-R85 UNIT 1-CALC12210-NM1C1-5DE-1803. REV111

RRS. OF RCC.-REACTOR BLDG.-EL=70.000, MASS=01.5E16. MODEL-TOP OF MAT

PERK SPREAD -20% SEISMIC.-15Z HYDRODYNAMIC

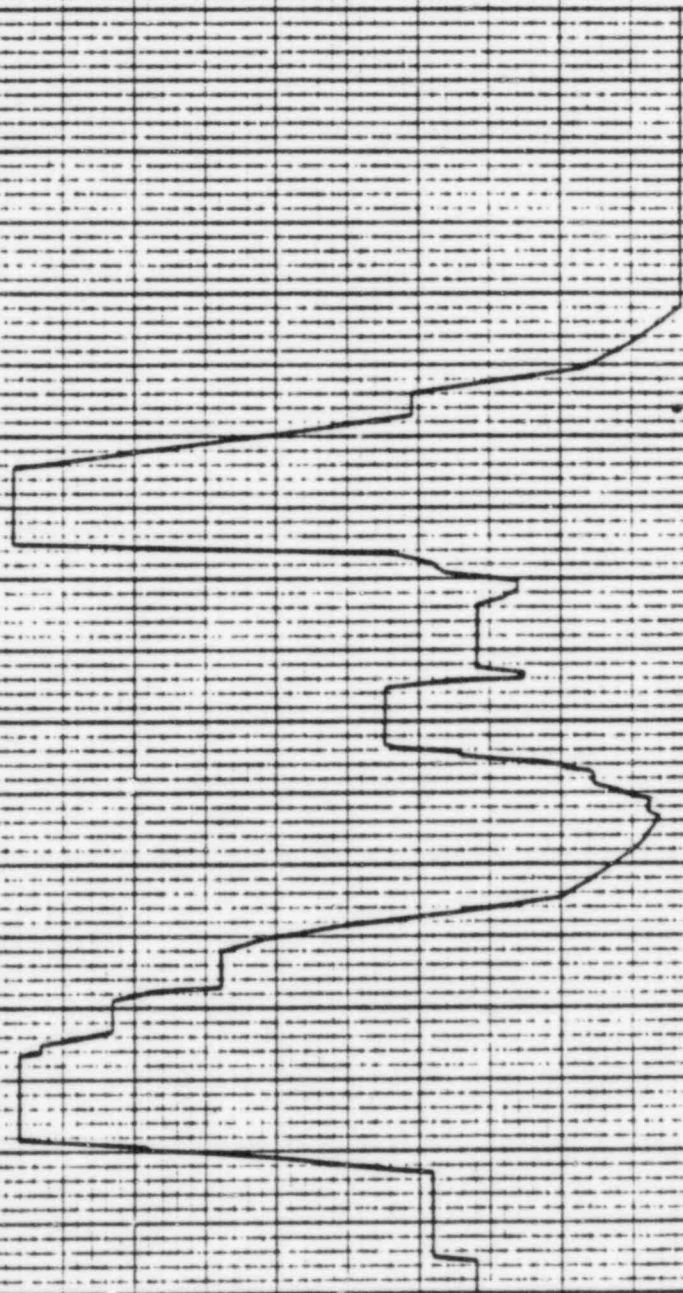
DISK CURVE SEI NO.1 MOR DIRECTION

NOTE: BASE OF 00E16M18V1V, SW.16V, SRIC01, CALC. 8-12-81-01

201.130-121-0.120-120-1.120-1.11-01

ACCELERATION G

0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40



FREQUENCY IN HZ

10⁰ 10¹ 10²

1067A

9 FEB 1963

K.MAT

DAMPING VALUE = 0.020

UPSET CONDITION

DISK CURVE SET NO. 1

VER DIRECTION

NOTE: BRSS OF ONE ENVIRONMENT. EV. 100.000001. (ALC-6-12210-201-1120-0.110-0.120-0.11-01)

PERK SPREAD -20% +25% SEISMIC. 1-16Z HYDRODYNAMIC.

RRS OF RCL. - REACTOR BLDG. EL=70.000. MR65-03 5E16 MODEL-TOP OF MAT

DW.F. STATES UTILITIES-RBS UNIT 1-ELC12210-MNICJ-50E-1903-REV11)

SPECTRUM VER ON LEV DB

UPSET CONDITION

VER DIRECTION

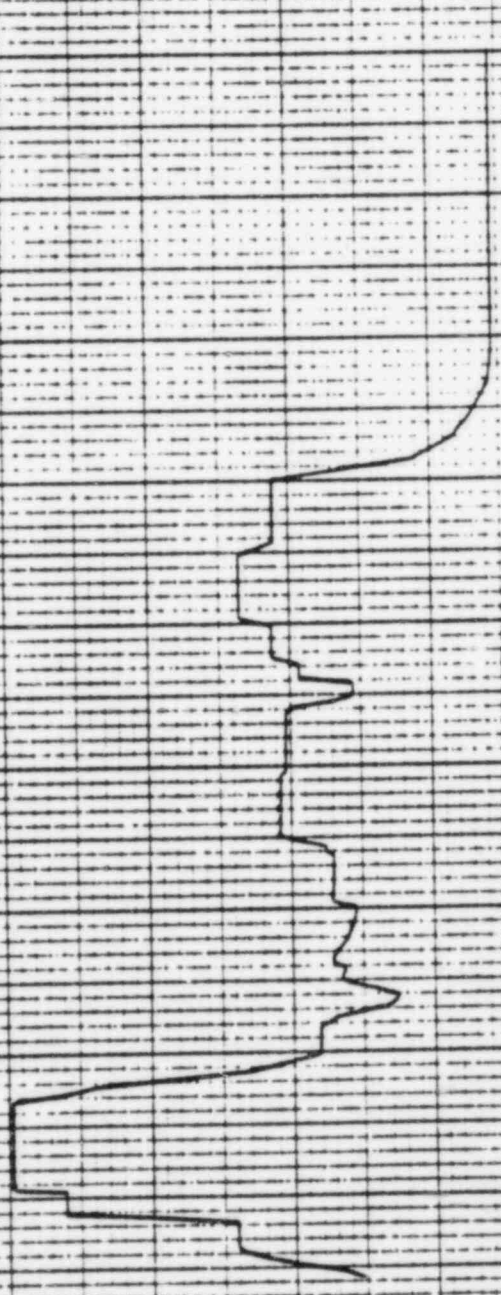
NOTE: BRSS OF ONE ENVIRONMENT. EV. 100.000001. (ALC-6-12210-201-1120-0.110-0.120-0.11-01)

ACCELERATION G

0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80

FREQUENCY IN HZ

10⁰ 10¹ 10² 10³ 10⁴ 10⁵



8 FEB 1963

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

GULF STATES UTILITIES-RBS UNIT 1-CALC(2210-NMIC)-SQE-1903 REV(1)
RMS OF ACC.--REACTOR BLDG., EL=70-000, MASS=01 SEIS MODEL-TOP OF MAT
PEAK SPREAD -20%, +25% SEISMIC, P-15% HYDRODYNAMIC

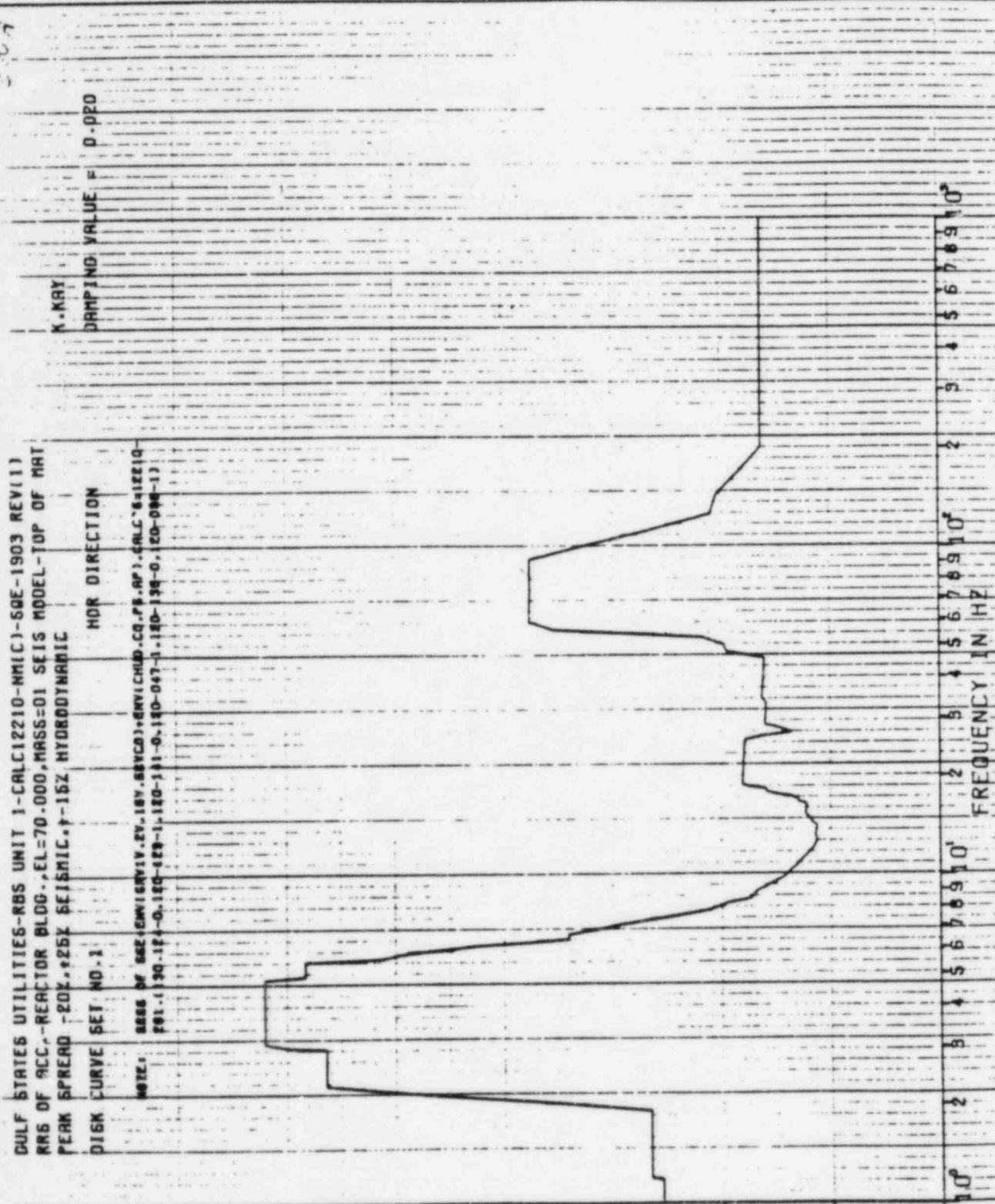
DISK CURVE SET NO. 1 HOR DIRECTION

NOTE: BASE OF 662/CUMISRVIV.ZV.18V.88VCO)+SRVICHID.CQ.PS.MP).CALC*641Z21Q
P81.1130-12-0.180-829-1.180-111-0.180-047-1.180-138-0.180-098-1)

K-KAY
DAMPING VALUE = 0.020

ACCELERATION G

FREQUENCY IN HZ



571A

8 FEB 1983

FAULTED CONDITION

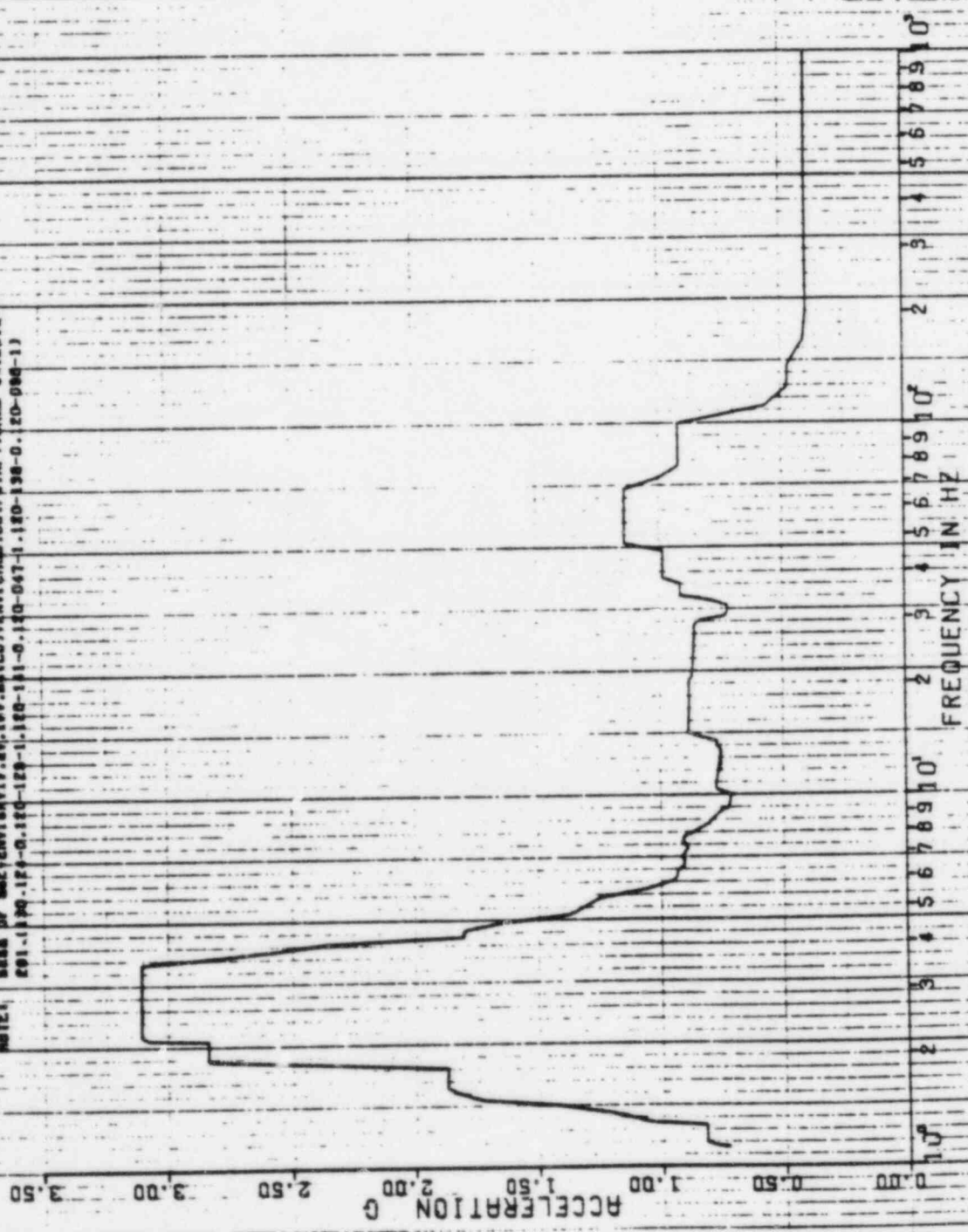
PSPECTRA VER 01 LEV 08

GULF STATES UTILITIES-RBS UNIT 1-CALC12210-MMIC1-SQE-1903 REV11)
RBS OF ACC.-REACTOR BLDG., EL=70.000, MASS=01 SE16 MODEL-TOP OF MAT
PEAK SPREAD -20% +25% SEISMIC. P-15Z HYDRODYNAMIC

DISK CURVE SET NO. 1 VER DIRECTION

NOTE: SESS OF SAE ENVISORVIV. SW. 18V. 65VCO) ENVICMD. CO. (P. RP). CALC *612210-
291-1120-124-0.120-129-1.120-131-0.120-047-1.120-138-0.120-088-1)

K. KAY
DAMPING VALUE F 0.020



7371

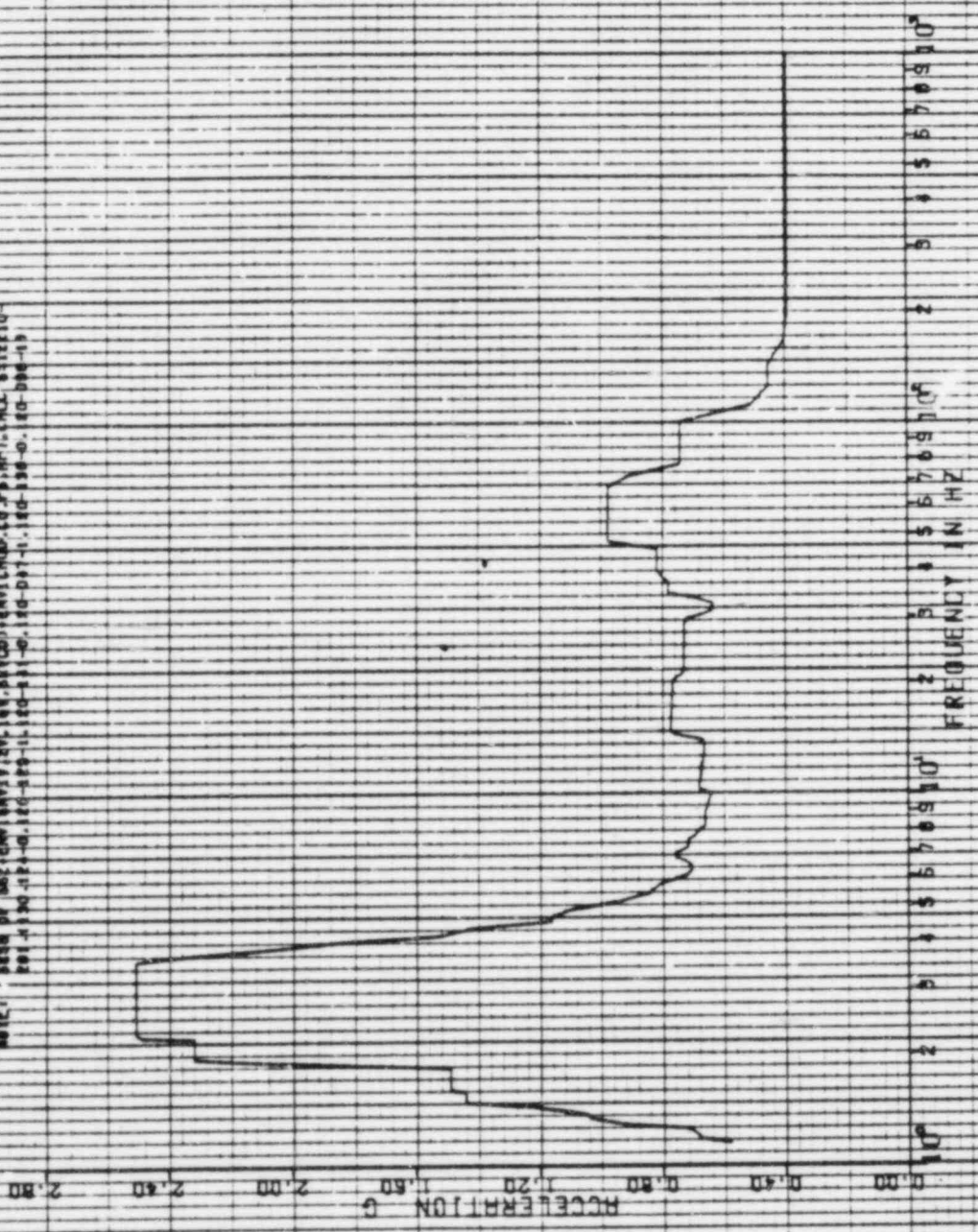
8 FEB 1965

SPECTRA VER 01 LEV 05
 DULF STATES UTILITIES-RBS UNIT 1-CALCULATED-NR(C)-SPE-1803 REV117
 NR5 OF RCL-REACTOR BLDG., EL=70.000, MASS=01 SEIS MODEL, TOP OF MRY
 PERK SPREAD -20Z, 25Z SEISMIC, 7-18Z HYDRODYNAMIC
 DISK CURVE SET NO. 1
 WZR DIRECTION

K. ARY

DAMPING VALUE = 0.050

NOTE: BASE OF OSC. CURVE IS AT 144.000000 INCHES. CO. 75.000000 INCHES.
 201.130000 INCHES. 1.000000 INCHES. 1.000000 INCHES. 1.000000 INCHES.



162A

8 FEB 1983

K. MAY

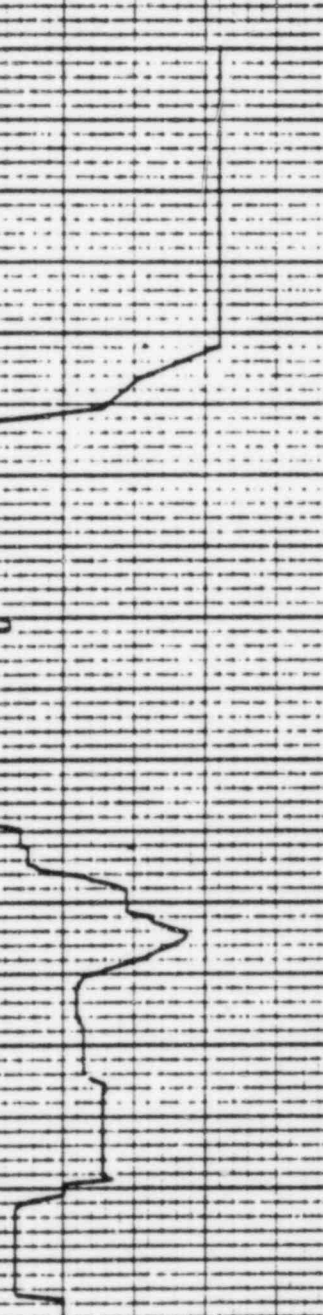
DAMPING VALUE = 0.020

PSPECTRA VER 01 LEV DB
 DULF STATES UTILITIES-RBS UNIT 1FCALC12210-NM(C)-SDE-1909 REV11)
 RMS OF ACC.-REACTOR BLDG., EL. 112.67, MASS=03 5E16 MODEL-SHIELD BLDG
 PEAK SPREAD -20Z, 25Z 5E15MIL, F=16Z HYDRODYNAMIC
 DISK CURVE SET NO. 2
 HDR DIRECTION

NOTE: BASE OF 08Z-COVI84V17.24.189.389C61.CALC-8-12810-
 201 (1190-121)-8.120-129-1.120-131-01.

ACCELERATION G
 2.00
 1.50
 1.00
 0.50
 0.00

FREQUENCY IN HZ
 10⁰
 10¹
 10²
 10³
 10⁴
 10⁵
 10⁶



9 FEB 1963

K. MAY

DAMPING VALUE = 0.020

UPSET CONDITION

1-CR1C12210-MN(C)-50E-1909 REV11)
RBS OF REC. REACTOR BLDG. EL-112.67 MASS-03 5E16 MODEL-SHIELD 8100
PEAK SPREAD -20% .25Z SEISMIC. 1-15Z HYDRODYNAMIC

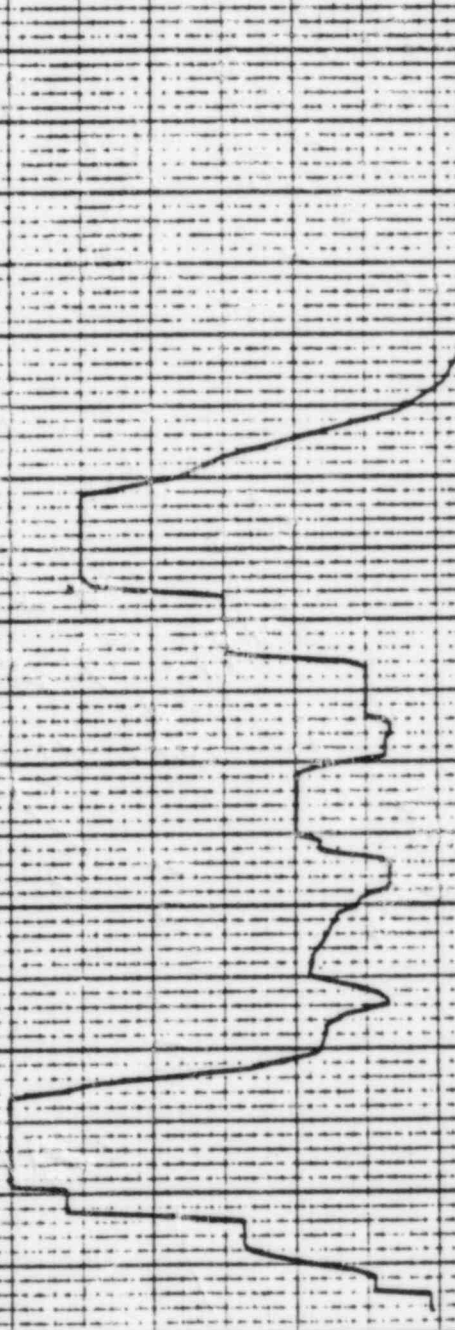
VER DIRECTION

DISK CURVE SET NO. 2

NOTE: BASE OF 002-ENVIR(VI) 2V. 18V. BVC(S). CAL. 8-12210-
201-1120-17-6. 110-129-11. 523-111-01

ACCELERATION G

FREQUENCY IN HZ



6679

8 FEB 1983

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

DULF STATES UTILITIES-RBS UNIT 1-CALC12210-MMIC1)-50E-1903 REV(1)
RBS OF ACC.-REACTOR BLDG.-EL-112.67, MASS=03 SE16 MODEL-SHIELD BLDG
PEAK SPREAD -20%+25% SEISMIC.+15% HYDRODYNAMIC

DISK CURVE SET NO. 2

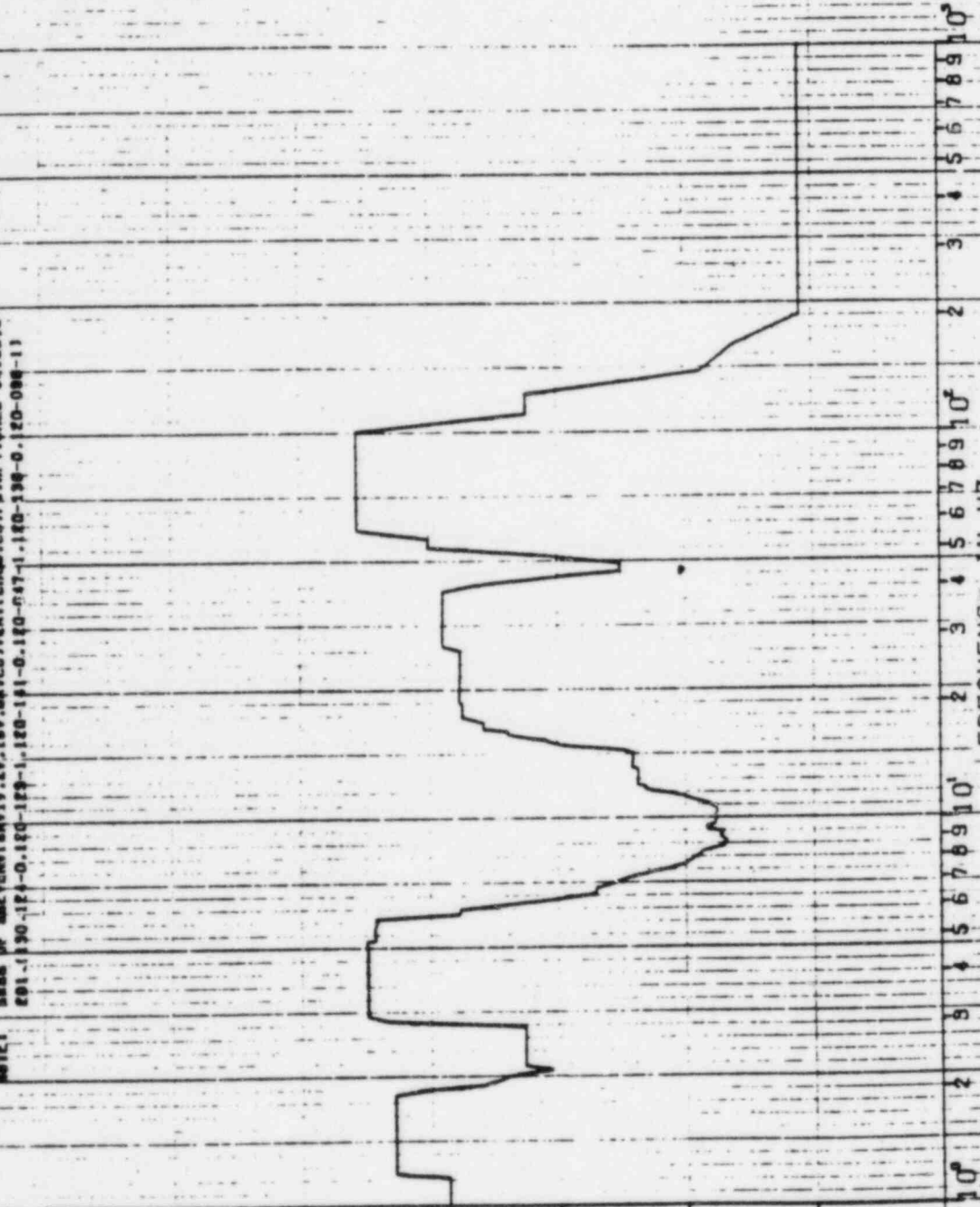
HOR DIRECTION

DAMPING VALUE = 0.020

NOTE: RBS OF ACC.-REACTOR BLDG.-EL-112.67, MASS=03 SE16 MODEL-SHIELD BLDG
RBS OF ACC.-REACTOR BLDG.-EL-112.67, MASS=03 SE16 MODEL-SHIELD BLDG

ACCELERATION G

FREQUENCY IN HZ



2724

8 FEB 1963

FAULTED CONDITION

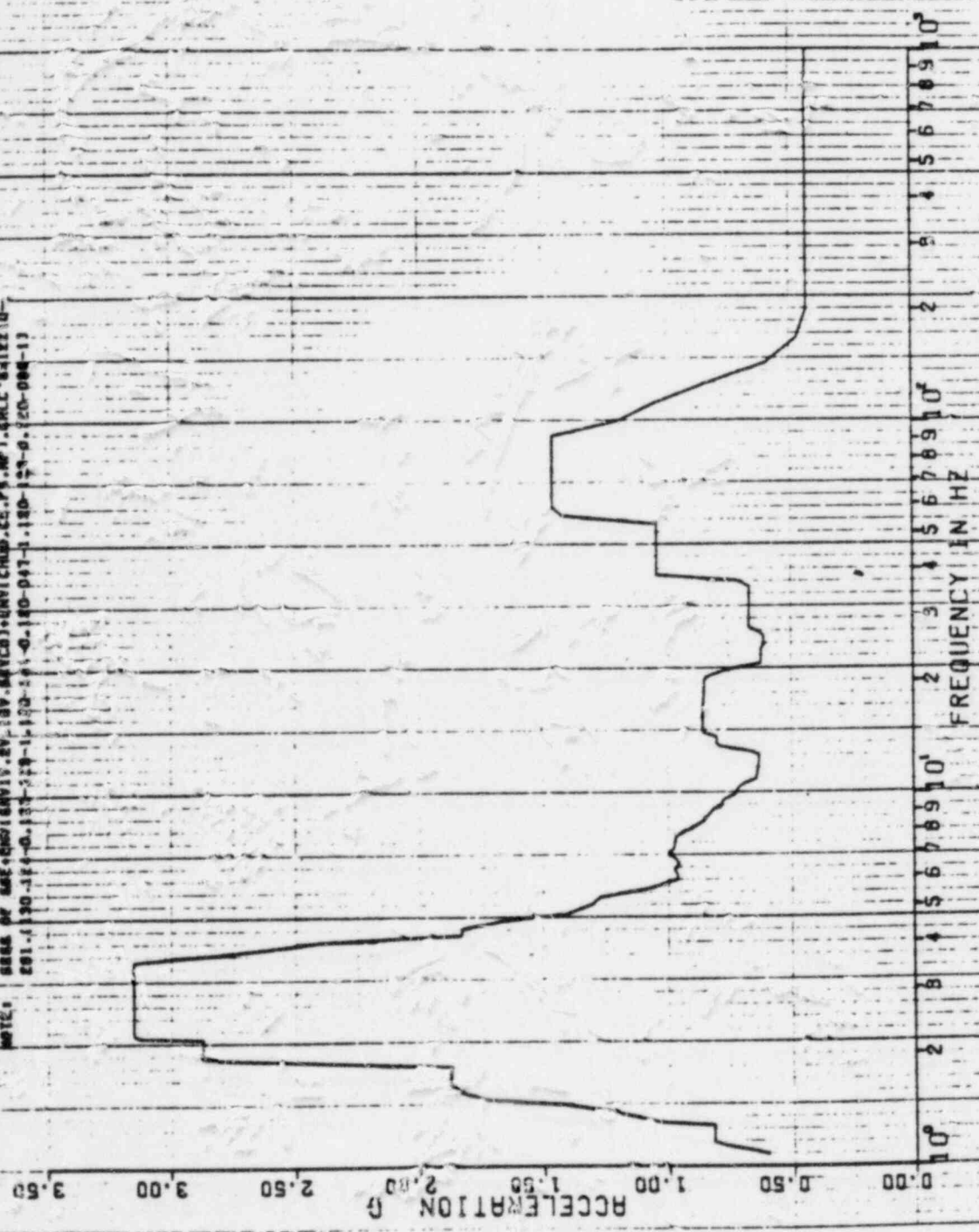
PSPECTRA VER 01 LEV 08

DULF STATES UTILITIES-KBS UNIT 1-CALC12210-NMICJ-SQE-1903 REV(1)
RRS OF ACC--REACTOR BLDG., EL=112.67, MASS=03 SEIS MODEL-SHIELD BLDG
PEAK SPREAD -20% ±25% SEISMIC. P-15Z HYDRODYNAMIC

DISK CURVE SET NO. P VER DIRECTION

NOTE: SEIS OF ARE: QW18W15.2V.18V.88VCB3+QWVICHUB.CC.P.9P1.CALC.8412210-
201.130-184-0.133-119-1.100-51-0.180-047-1.180-124-0.120-088-13

K-KAY
DAMPING VALUE = 0.020



94.1A

9 FEB 1969

PERFECTA VER D1 LEV DB
 DULF STATES UTILITIES-RBS UNIT 1-CALC12210-MM CT-50E-1909 REV117
 RBS OF ACC.-REACTOR BLDG. 1EL-11P.67 MASS-03 SEIS MODEL-SHIELD BLOW
 PERK SPREAD -20X.25X SEISMIC. 1-15Z HYDRODYNAMIC
 DISK CURVE SET NO. 2

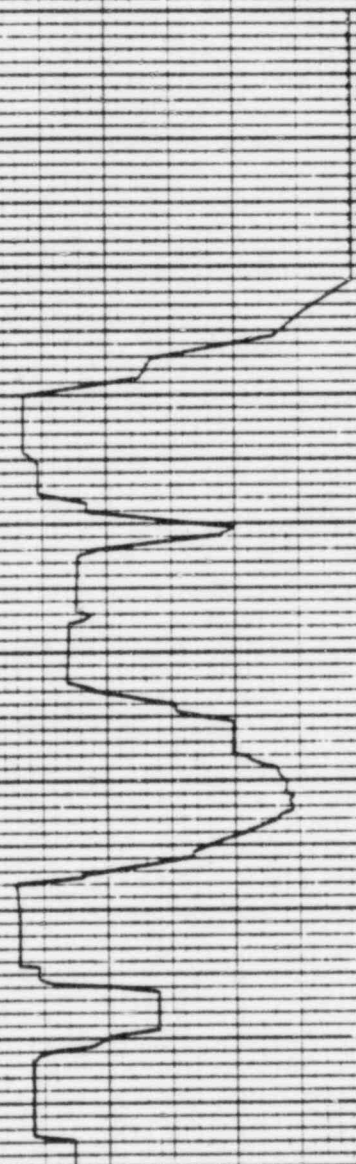
Faulted Condition

DAMPING VALUE = 0.050

NOTE: RBS OF ACC. REACTOR BLDG. 1EL-11P.67 MASS-03 SEIS MODEL-SHIELD BLOW
 PERK SPREAD -20X.25X SEISMIC. 1-15Z HYDRODYNAMIC

ACCELERATION

0.00
 0.40
 0.80
 1.20
 1.60
 2.00
 2.40
 2.80



10⁰ 2 5 1 5 6 7 0 9 1 0¹ 2 5 1 5 6 7 0 9 1 0²

FREQUENCY IN HZ

947A

9 FEB 1968

KARRY

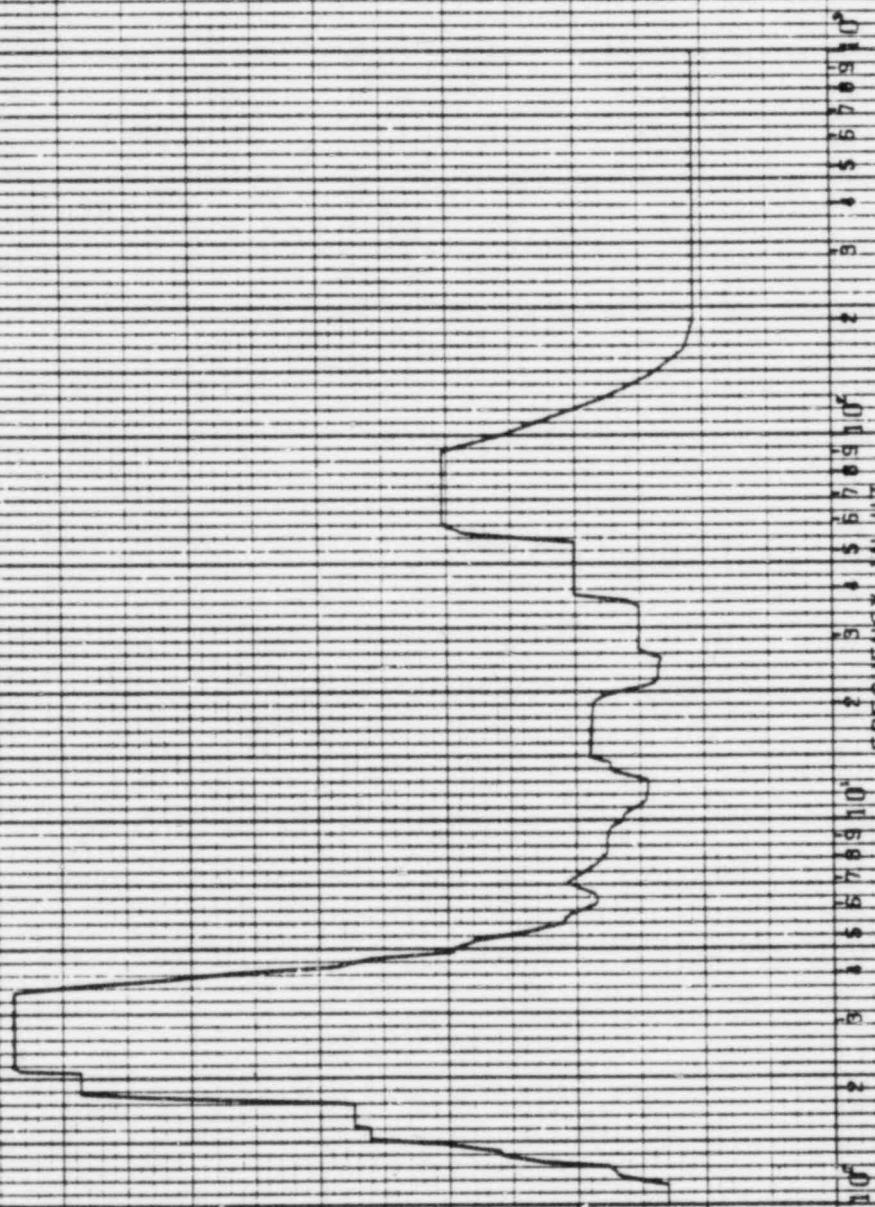
DAMPING VALUE = 0.050

SPECTRA VER DI LEV DB
 GULF STATES UTILITIES-RBS UNIT 1-CRUCI2210-NMIC7-50E-1903 REV111
 WBS OF ACC.-REACTOR BLDG.-FL11P.67, MASS-03 SEIS MODEL-SHIELD BLDG
 PERK SPRERD.-PDKL.P52L SEISMIC.1.152 HYDRODYNAMIC
 DISK CURVE SET NO.-2

VER DIRECTION

NOTE: MADE BY 6621ENVISAVI,AV.10X,BAYCON,ENVICAD.CO,75.0P). (ALC'6412210-
 X01.1130-123-0.120-123-1.120-123-1.120-123-1.120-123-1.120-123-1.120-123-1)

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80



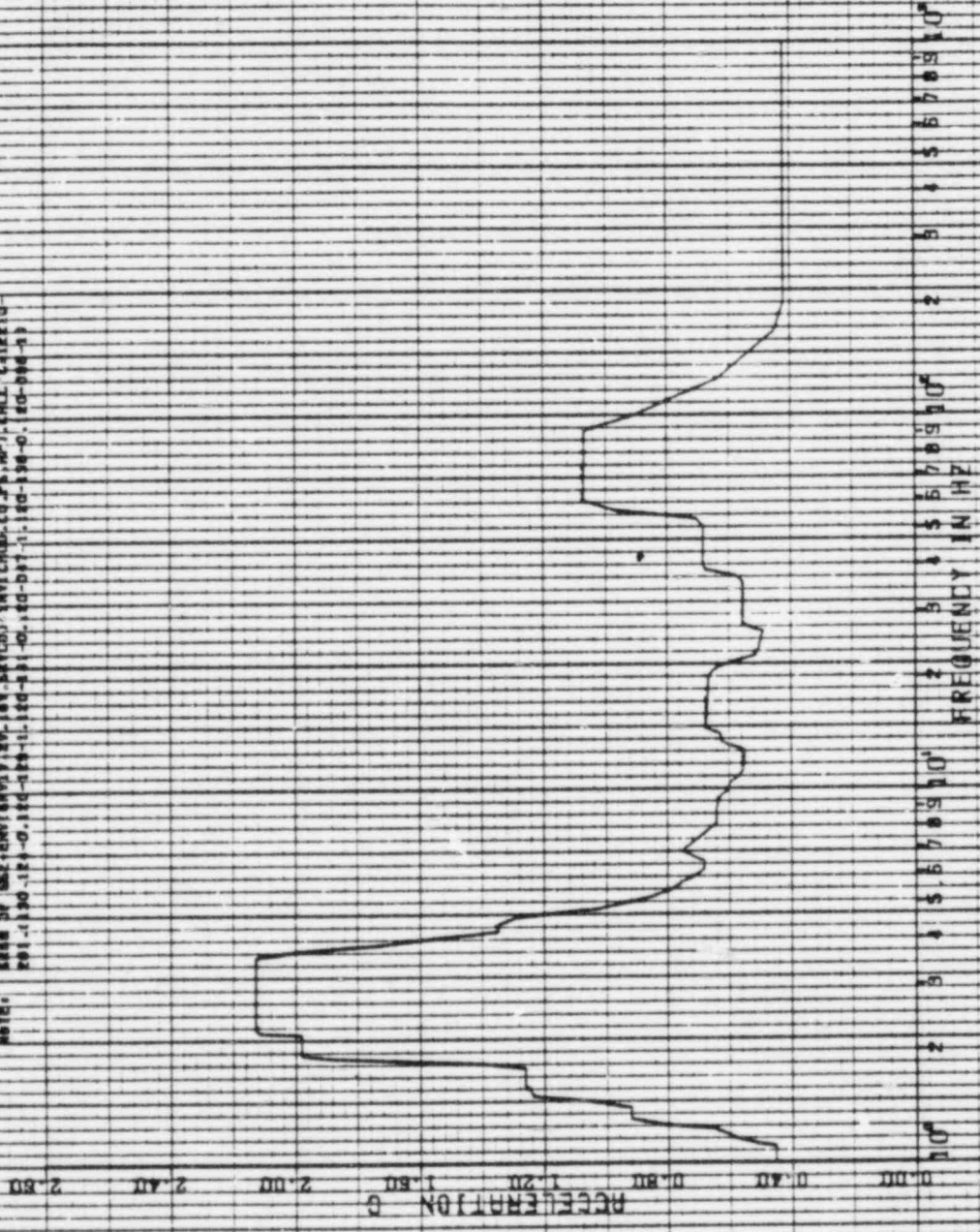
10^0 10^0.5 10^1 10^1.5 10^2

8 FEB 1955
K. KRY
DAMPING VALUE = 0.000

PERCENTAGE VER ON LEV 08
DULF STATES UTILITIES-RBS UNIT 1-CR1221C-MM C7-502-1803 REV117
RBS OF REC.-REACTOR BLDG.-FL 17-67, MASS-09 SEIS MODEL-SHIELD BLOB
PERK SPREAD - POK-252.5E15MIC-1.15Z HYDRODYNAMIC
DISK CURVE SET NO. 2
VER DIRECTION

FAULTED CONDITION

NOTE: MADE BY GEZ:EMPI:RVS7, EV. 104, 247003, INVE:CHUB, CO. 25, 4071, CALZ. 6, 112210-
P01 -1.190 -124 -0.180 -124 -11.180 -31 -0.180 -0.180 -1.180 -198 -0.180 -0.180 -19



10⁰ 2 3 4 5 6 7 8 9 10¹ 2 3 4 5 6 7 8 9 10²
0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80
FREQUENCY IN HZ

670A

9 FEB 1985

K. KAY

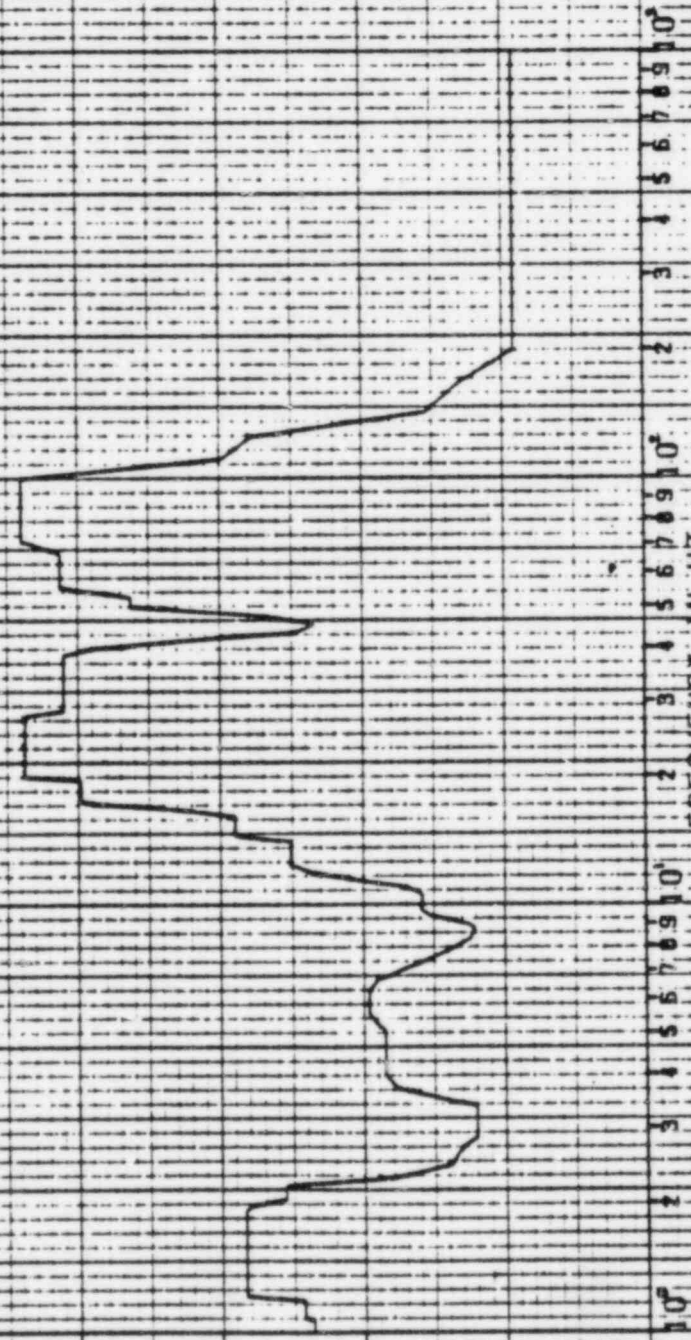
DAMPING VALUE = 0.020

SPECTRA VER D1 LEV 08
 DUFF STATES UTILITIES-RBS UNIT 1-CALC12210-WM C1-50E-1903 REV117
 RRS OF ACC.-REACTOR BLDG.-EL=192.99, MASS=04 SETS MODEL-SHIELD BLDG
 PEAK SPREAD = 20% ± 25% SEISMIC. → = 15Z HYDRODYNAMIC
 DISK CURVE SET, NO. 3
 UPSET CONDITION
 HOR DIRECTION

NOTE: BASE OF ONE (M) IS 11V. 2V. 10V. 0.0VCO1. (M.C.'S-12210-
 201-130-184-0-120-180-1-120-191-0)

ACCELERATION 0 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 8.00 8.50 9.00 9.50 10.00

FREQUENCY IN HZ
 10⁰ 10¹ 10² 10³ 10⁴ 10⁵



5 6 7 8 9 10

67/A

9 FEB 1983

K. KAY

DAMPING VALUE = 0.020

UPSET CONDITION

SPECTRA VER D LEV 08
DULF STATES UTI LITIE5-RBS UNIT 1-CAL C12210-MN(C)-50E-1903 REV(1)
RMS OF ACC.-REACTOR BLOC. EL-192-99, MASSELO4 SETS MODEL-SHIELD BLOC
PEAK SPREAD -20% -> 25% SEISMIC. -> 16Z HYDRODYNAMIC

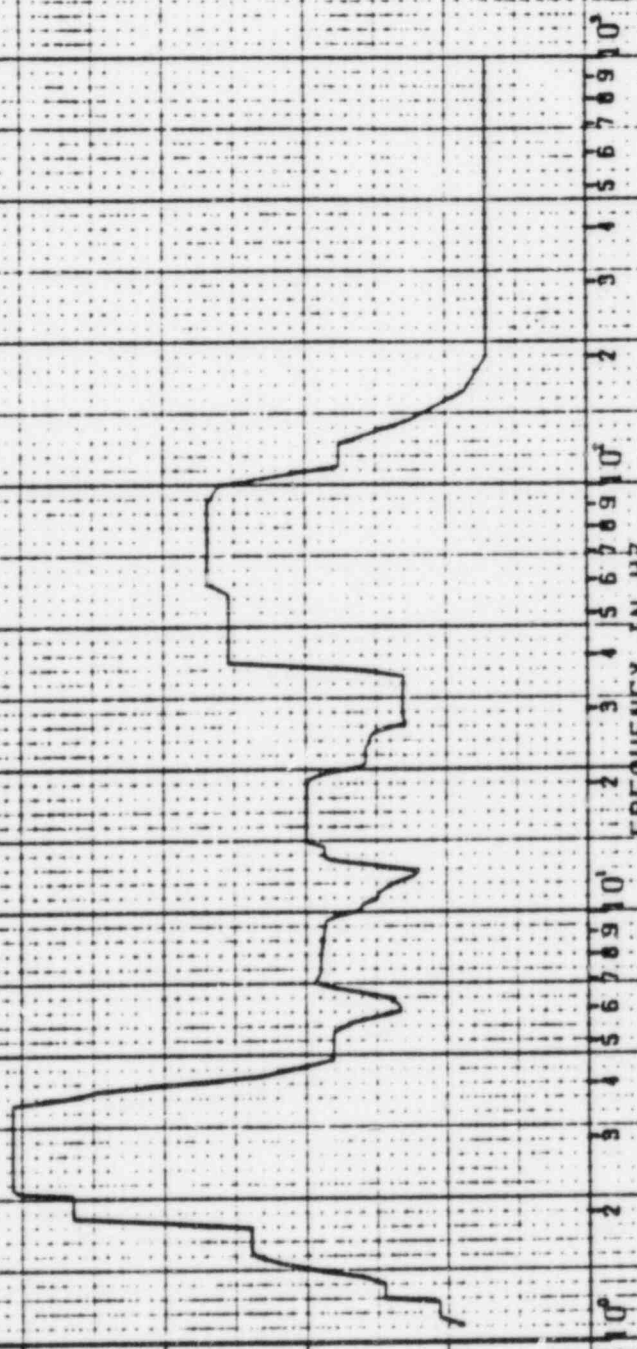
VER DIRECTION

NOTE: 8488 OF ONE (ENVI5) VIV. 2V. 10V. 10VCO1. CAL. 8-12210-
801.1 130.124-0.110-129-1.120-111-0

DISK CURVE SET NO. 3

ACCELERATION G

FREQUENCY IN HZ



5:17

8 FEB 1963

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

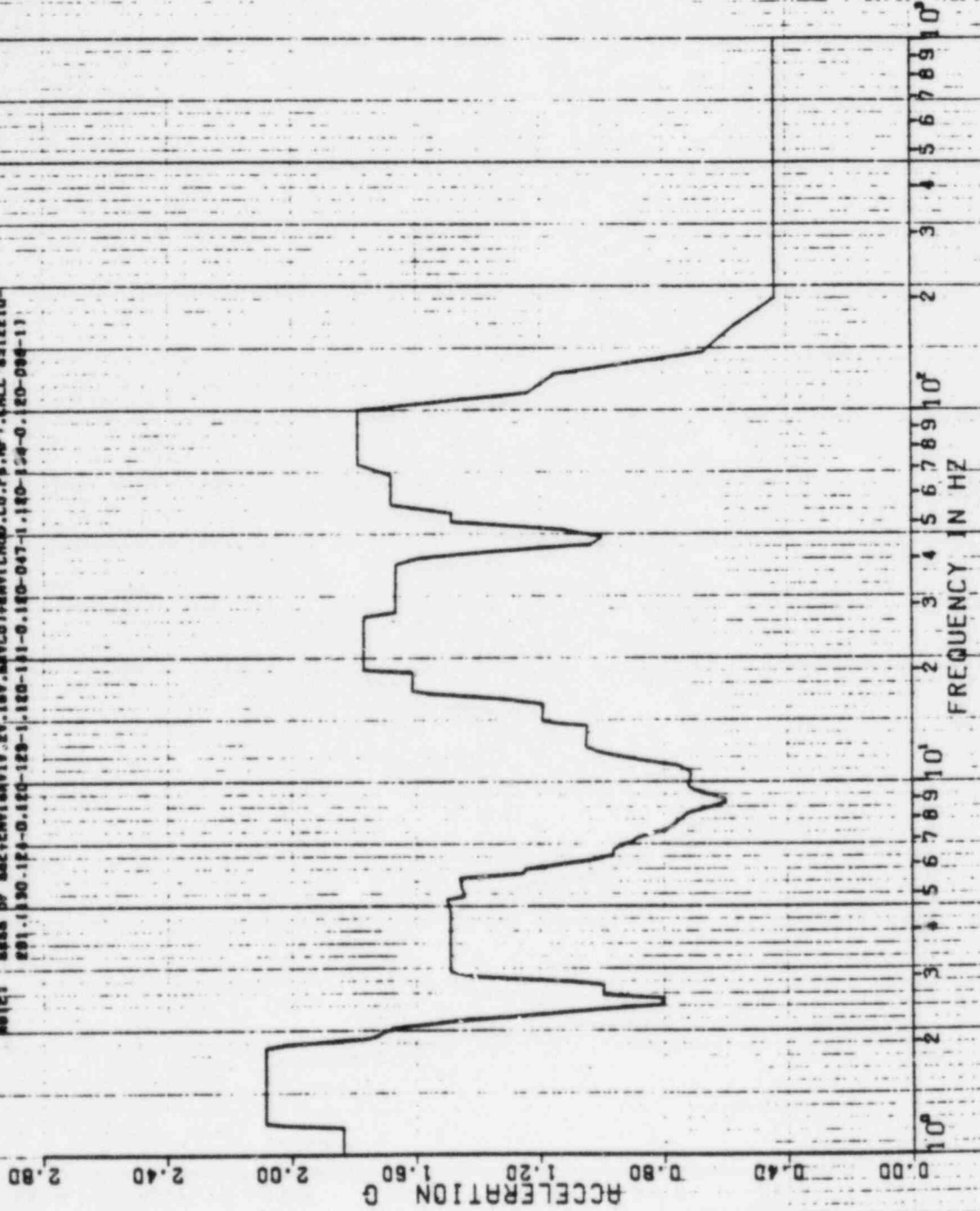
GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NMIC)-S0E-1903 REV(1)
RKS OF ACC.-REACTOR BLDG.-EL=192.98, MASS=04 SEIS MODEL-SHIELD BLDG
PEAK SPREAD -20% +25% SEISMIC. P-15% HYDRODYNAMIC

DISK CURVE SET NO.3

HOR DIRECTION

DAMPING VALUE = 0.020

NOTE: 8808 OF 842, 2MVISRIV, EV, 18V, 8MVIC1, 8MVIC2, CO, P, AP, CALC 812210-
881, 1190-124-0.120-128-1.120-131-0.120-047-1.120-154-0.120-088-1)



315A

8 FEB 1983

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

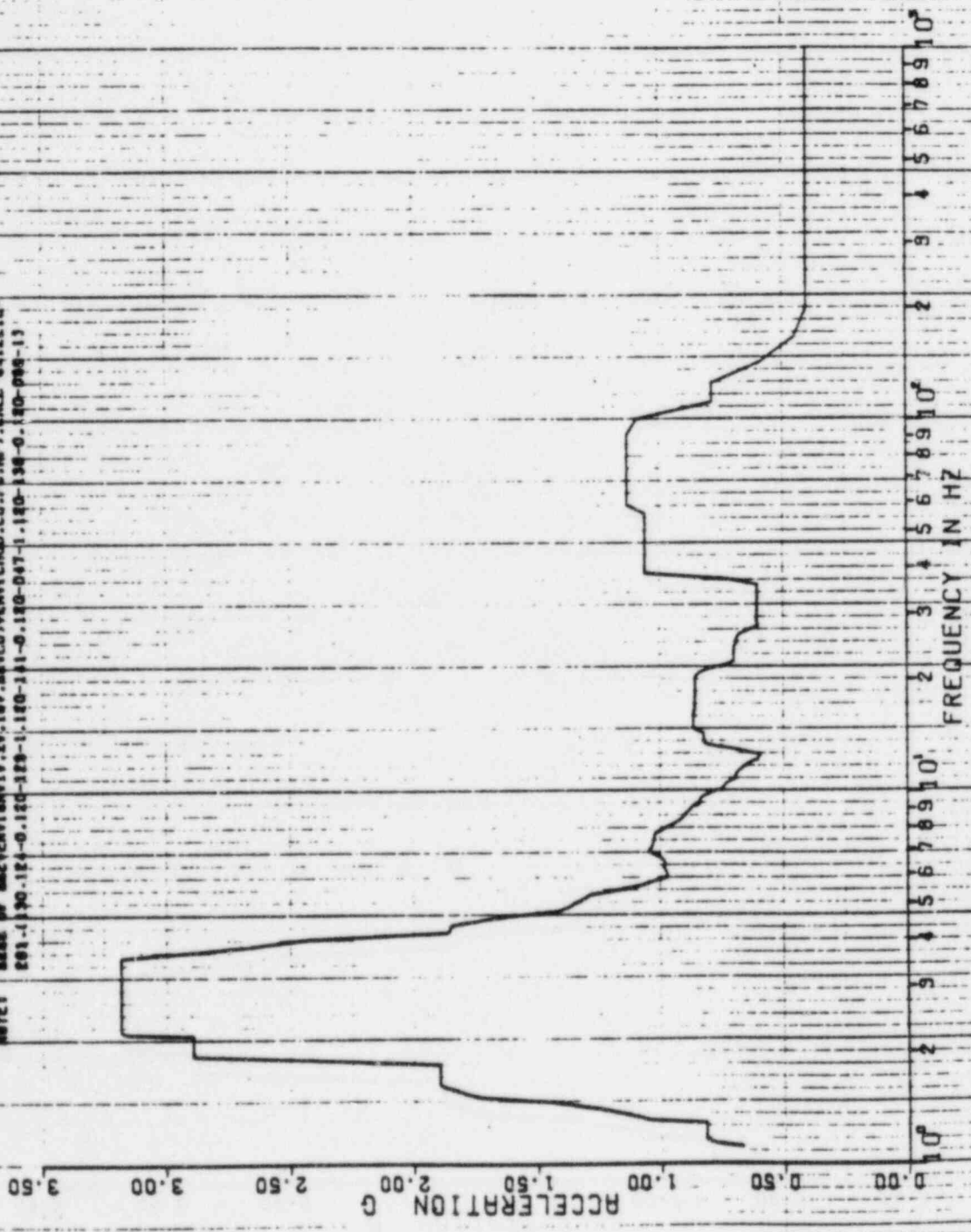
GULF STATES UTILITIES-RBS, UNIT 1-CALC12210-NM(C)-S9E-1903 REV(1)
RBS OF ACC.-REACTOR BLDG., EL=192.89, MASS=04 SE16 MODEL-SHIELD BLDG
PEAK SPREAD -20% ±25% SEISMIC. ±-15% HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO. 3

DAMPING VALUE = 0.020

NOTE: BASE OF SHEAR-ENVIRONMENTAL VIBRATION ANALYSIS (S.E.A.)
S01-1190-124-0-120-129-1-120-131-0-120-134-0-120-138-0-120-142-13



5 6 7 8 9 10⁰
10¹
10²
10³

9 FEB 1983

9-72A

PSPECTRA VER DI LEV DB
 DULF STATES UTILI 1ES-RBS UNIT 1-CALC12210-WR1C1-5DE-1903 REV117
 RRS OF RCL-REACTOR BLDG. TEL:192.89.7R5E104 SE16 MODEL-SHIELD BLDG
 PEAK SPREAD -20Y. 125Z SEISMIC. 1-15Z HYDRODYNAMIC

K. NRY

DAMPING VALUE = 0.050

HDR DIRECTION

DESK CURVE SET NO. 5

NOTE: BASE OF CURVE IS 0.001 G. (SEE INSTRUCTIONS FOR CALCULATION)
 FOR: 1. 100-114-G. 100-100-1. 100-111-G. 100-117-G. 100-100-G. 100-100-1

ACCELERATION G
 2.00
 1.50
 1.00
 0.50
 0.00



FREQUENCY IN HZ
 10^0 10^1 10^2

10/1/88

8 FEB 1988

SPECTRA VER. DB LEV DB
 DULF STATES UTILITIES-RBB UNIT 3-CRCLIPID-MMIC7-SQE-1903 REV113
 KRIS OF REC.-REACTOR BLDG.-EL-192.5B.MRS5-D4 SEIS MODEL-SHIELD 0100
 PERK SPREAD -RZL.+P5Z SET5MIC.2-15Z HYDRODYNAMIC
 DISK CURVE SET NO. 5
 MDR DIRECTION

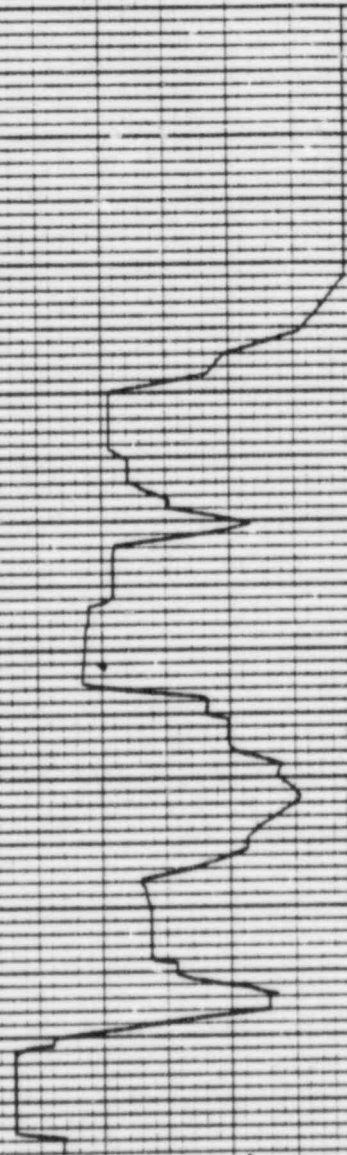
K.KRY

DAMPING VALUE = 0.000

NOTE: READ BY 002-KNVI8W19.4V.10V.877000-ENVICR05.C0.2'S.MF7.C0L.642216-
 201.0190.123-0.122-123-1.120-121-0.120-017-1.120-120-0.120-004-13

ACCELERATION 0 0.50 1.00 1.50 2.00 2.50

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



10/12

9 FEB 1988

K. KRY

DAMPING VALUE = D.DWD

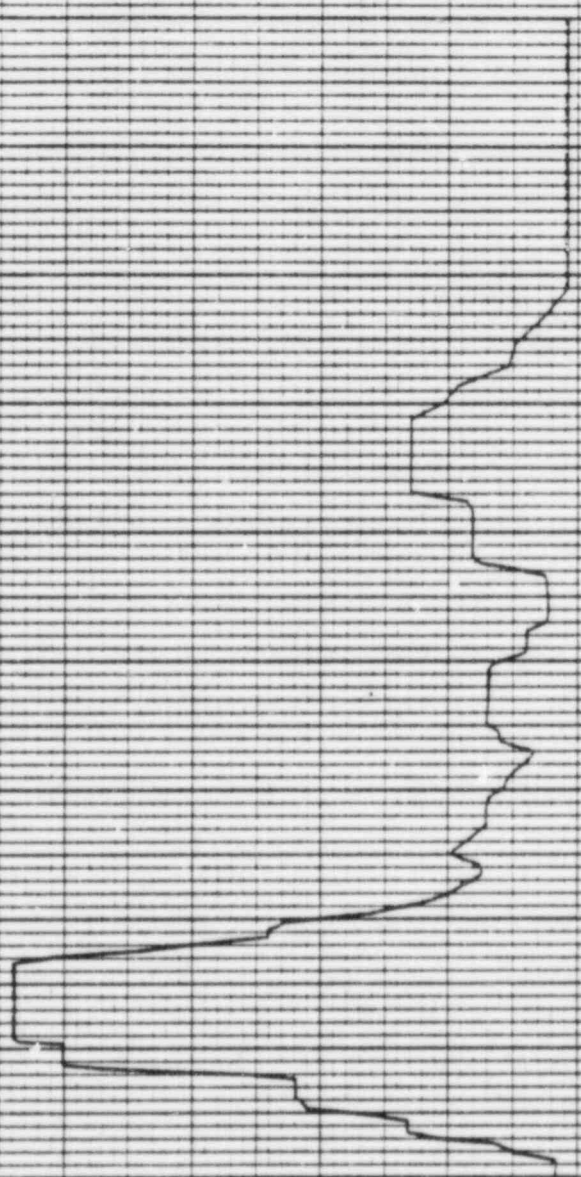
FAULTED CONDITION

ASPECTR VER DA LEV DB
DULF STATES UTILITIES-R86 UNIT 1-CALC:2210-NM1C7-SQE-1805 REV117
RRS OF REC-REACTOR BLDG., EL:187.88, MASS:50N SEIS MODEL-SWFIELD BLDG
PEAK SPREAD: -20Z,+25Z SEISMIC: 1-15X HYDRODYNAMIC

DISK CURVE SET NO. 3 VER DIRECTION

NOTE: USED BY 652-600/6007.RV.10V.22/1001-64V1.CM0.C0.75.UM1.CALC:612210-
891.1130-1181-0.120-188-11.1/0-131-0.120-201-1.120-130-0.120-200-0

ACCELERATION G



FREQUENCY IN HZ

6774

9 FEB 1983

K. KAY

DAMPING VALUE = 0.020

SPECTRA VER 01 LEV 08
 CULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM C1-SOE-1903 REV11
 RRS OF ACC -- REACTOR BLDG. EL:153.32, MASS:95 SEIS MODEL--SHIELD BLDG
 PEAK SPREAD -- 20% +25% SEISMIC. 1-15% HYDRODYNAMIC
 DISK CURVE SET NO. 8
 UPSET CONDITION
 HOR DIRECTION

NOTE: GAGE OF 08Z (CHVIS0119.2V, 18V, 83VCS), CML: 8-12210-
 001-130-121-0, 120-120-1, 120-121-0

ACCELERATION

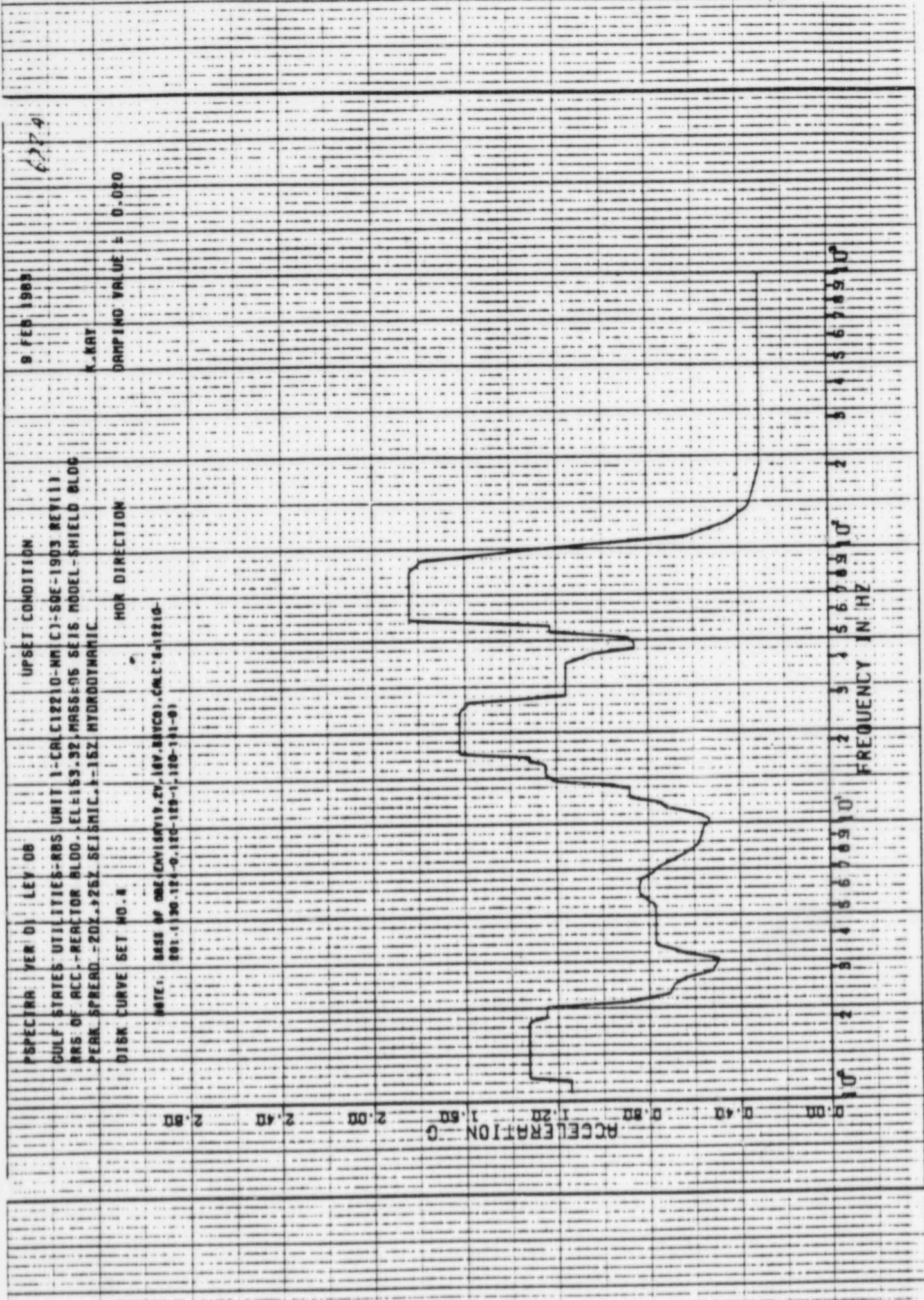
FREQUENCY IN HZ

5.678910⁰

5.678910⁰

5.678910⁰

5.678910⁰



67-9

9 FEB 1988

K.KRY

DAMPING VALUE = 0.020

UPSET CONDITION

VER DIRECTION

DISK CURVE SET NO. 4

NOTE: DATA OF ONE CHANNEL (V. 16V. 20VCS). CML'S 8-12110-201. 130-124-0-120-120-111-01

UNIT 1-CALC 1210-MM C-50E-1903 REV 11)

RRS OF ACC.-REACTOR BLDG., EL:153.32, MASS:05 SEIS MODEL-SHIELD BLDG

PERK SPREAD -20%+25% SEISMIC. 1-15Z HYDRODYNAMIC.

VER DIRECTION

UPSET CONDITION

UNIT 1-CALC 1210-MM C-50E-1903 REV 11)

RRS OF ACC.-REACTOR BLDG., EL:153.32, MASS:05 SEIS MODEL-SHIELD BLDG

PERK SPREAD -20%+25% SEISMIC. 1-15Z HYDRODYNAMIC.

VER DIRECTION

UPSET CONDITION

UNIT 1-CALC 1210-MM C-50E-1903 REV 11)

RRS OF ACC.-REACTOR BLDG., EL:153.32, MASS:05 SEIS MODEL-SHIELD BLDG

PERK SPREAD -20%+25% SEISMIC. 1-15Z HYDRODYNAMIC.

VER DIRECTION

UPSET CONDITION

UNIT 1-CALC 1210-MM C-50E-1903 REV 11)

RRS OF ACC.-REACTOR BLDG., EL:153.32, MASS:05 SEIS MODEL-SHIELD BLDG

PERK SPREAD -20%+25% SEISMIC. 1-15Z HYDRODYNAMIC.

VER DIRECTION

UPSET CONDITION

UNIT 1-CALC 1210-MM C-50E-1903 REV 11)

RRS OF ACC.-REACTOR BLDG., EL:153.32, MASS:05 SEIS MODEL-SHIELD BLDG

PERK SPREAD -20%+25% SEISMIC. 1-15Z HYDRODYNAMIC.

VER DIRECTION

UPSET CONDITION

UNIT 1-CALC 1210-MM C-50E-1903 REV 11)

RRS OF ACC.-REACTOR BLDG., EL:153.32, MASS:05 SEIS MODEL-SHIELD BLDG

PERK SPREAD -20%+25% SEISMIC. 1-15Z HYDRODYNAMIC.

VER DIRECTION

UPSET CONDITION

UNIT 1-CALC 1210-MM C-50E-1903 REV 11)

RRS OF ACC.-REACTOR BLDG., EL:153.32, MASS:05 SEIS MODEL-SHIELD BLDG

PERK SPREAD -20%+25% SEISMIC. 1-15Z HYDRODYNAMIC.

VER DIRECTION

UPSET CONDITION

UNIT 1-CALC 1210-MM C-50E-1903 REV 11)

RRS OF ACC.-REACTOR BLDG., EL:153.32, MASS:05 SEIS MODEL-SHIELD BLDG

PERK SPREAD -20%+25% SEISMIC. 1-15Z HYDRODYNAMIC.

VER DIRECTION

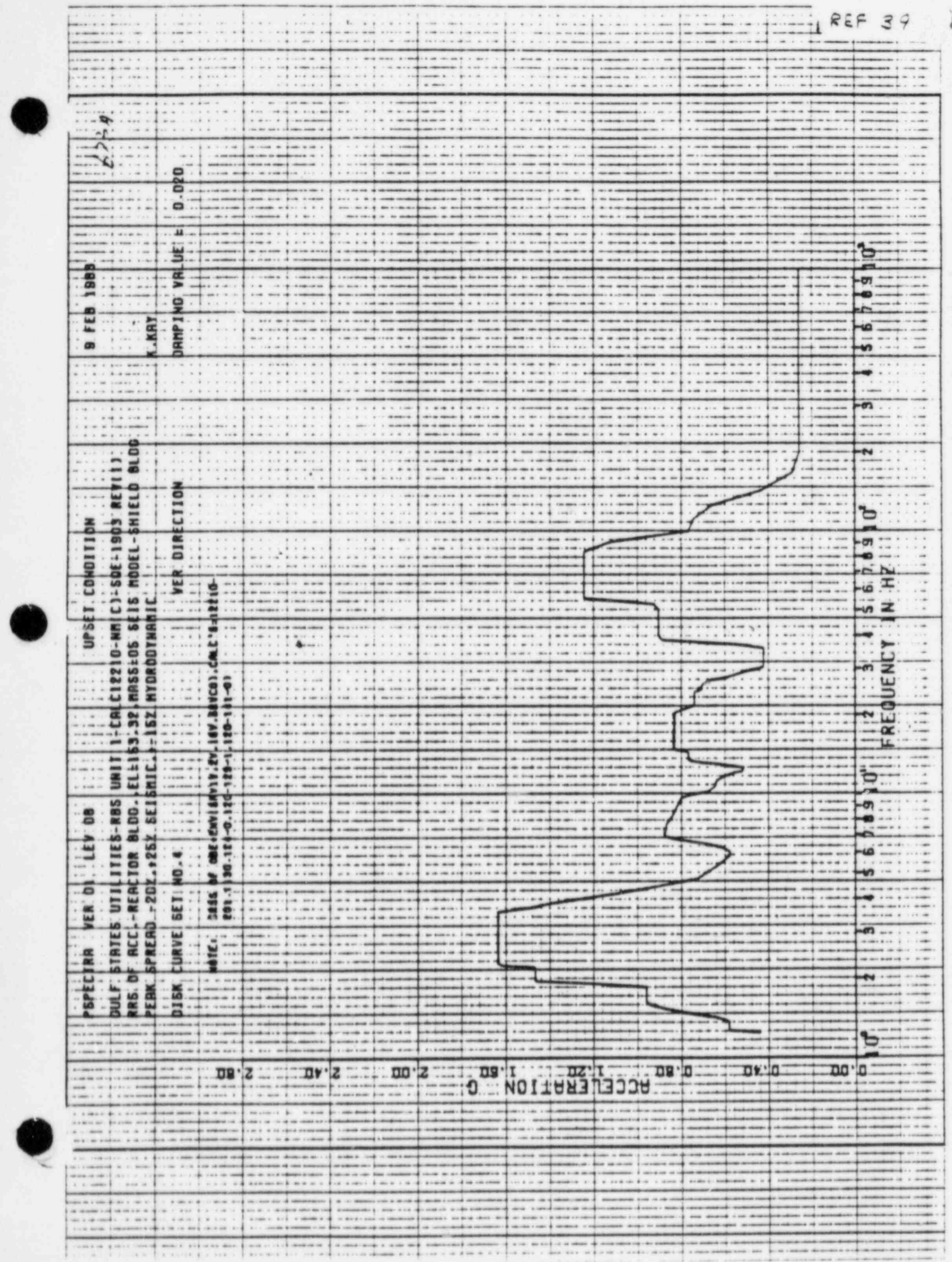
UPSET CONDITION

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80

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

5 6 7 8 9 10

5 6 7 8 9 10



3754

8 FEB 1983

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

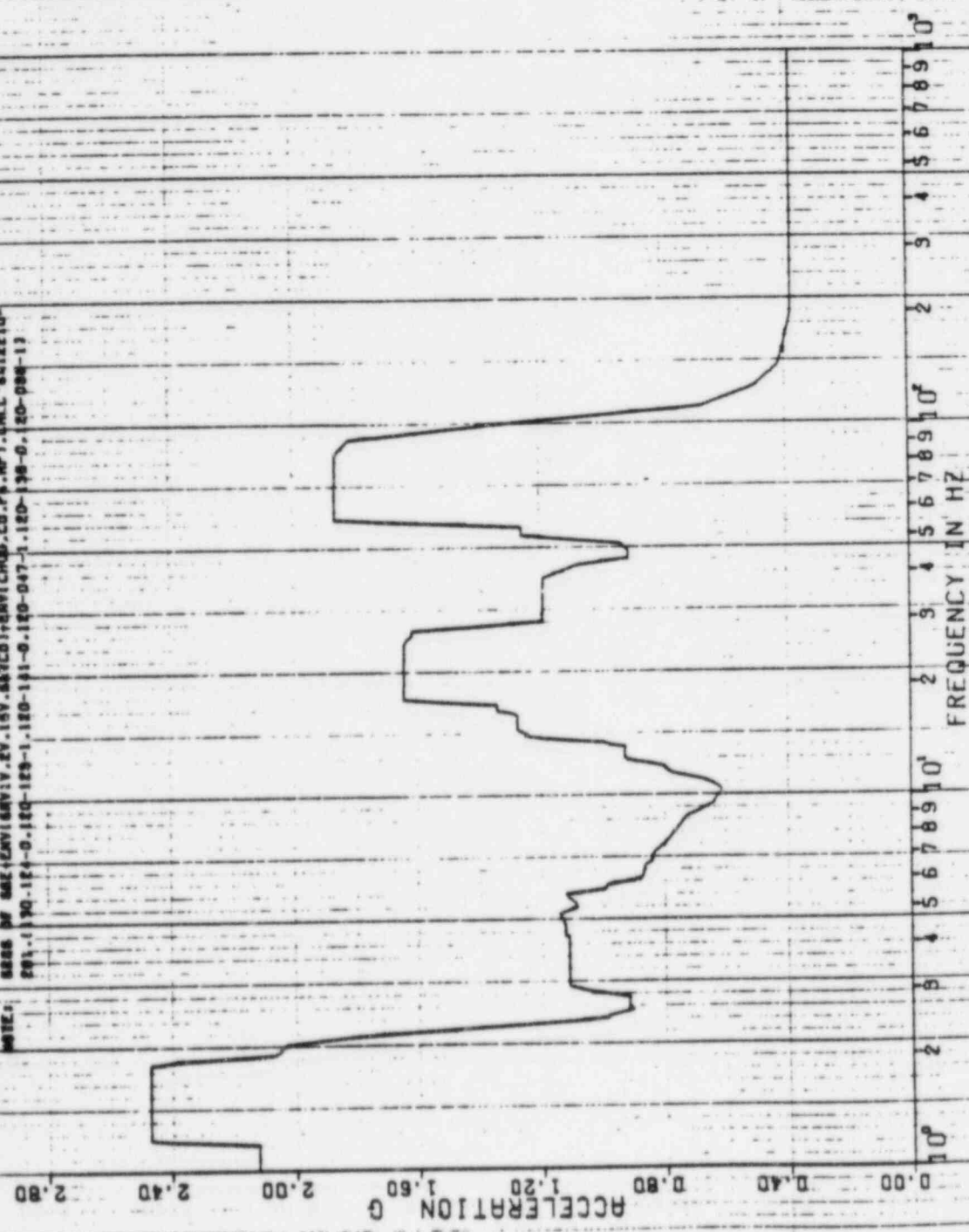
GULF STATES UTILITIES-RBS UNIT 1-CALC12210-MMIC1-59E-1903 REV(1)
RBS OF ACC.-REACTOR BLDG., EL=153.32, MASS=05 SE16 MODEL-SHIELD BLDG
PEAK SPREAD +20% +25% SEISMIC. 1-152 HYDRODYNAMIC

DISK CURVE SET NO. 4

HDR DIRECTION

DAMPING VALUE = 0.020

NOTE: RBS OF GAZ-CANVIGRIV.EV.15V.ASTCO1-ENVICHD.CO.P1.AP1.CALC.6412210-
291.1190.124-0.120-129-1.120-131-0.120-047-1.120-138-0.120-098-13



5719

8 FEB 1983

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

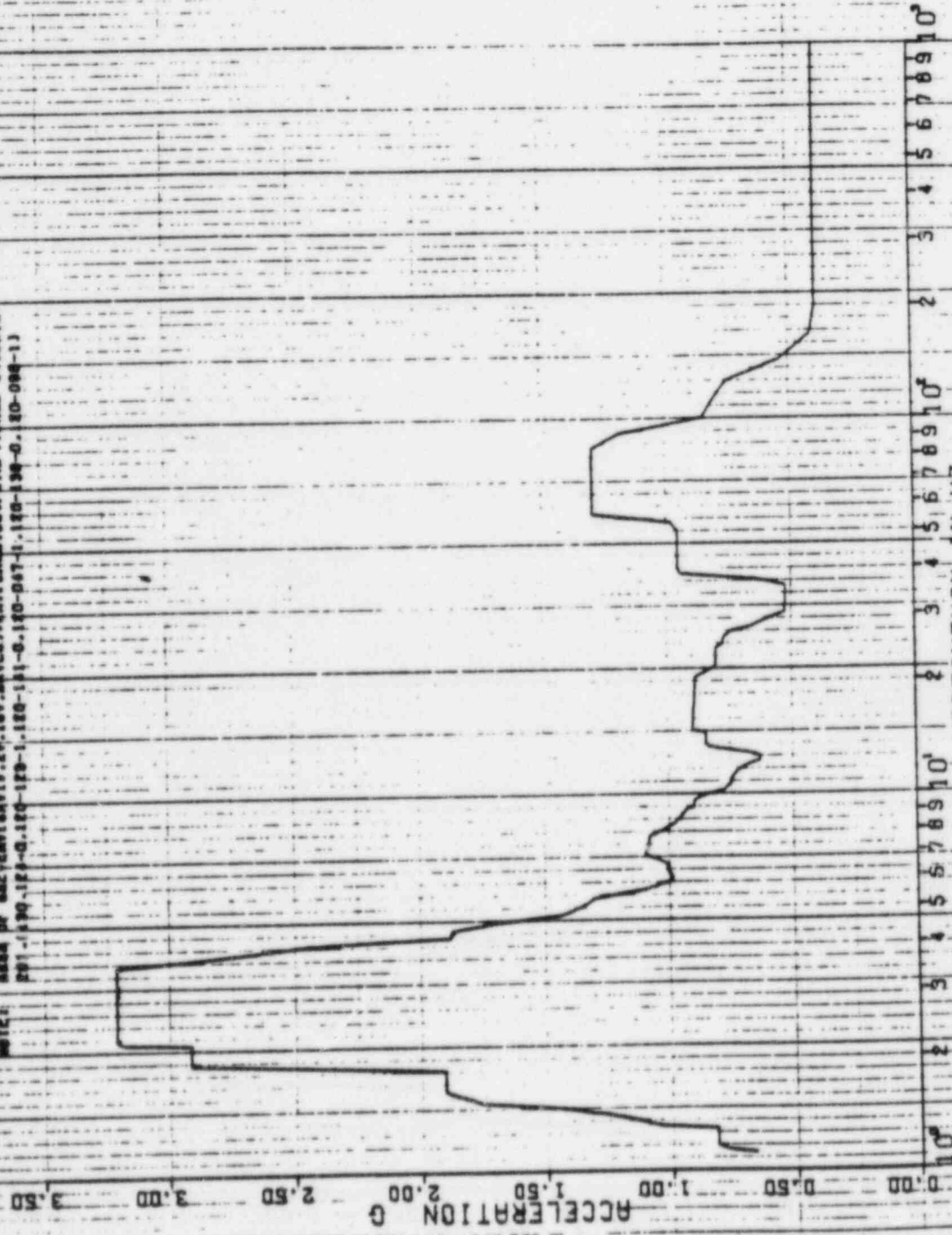
GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NMIC1-S9E-1903 REV111
RBS OF ACC.-REACTOR BLDG.-FL=153.32, MASS=05 5E16 MODEL-SHIELD BLDG
PEAK SPREAD FREQ. 25% SEISMIC. F-152 HYDRODYNAMIC

DISK CURVE SET NO. 4 VER DIRECTION

NOTE: AREA OF SAE:ENVIRSVIV.EV.18V.SRVCS1+ENVICUMD.CO.PS.MP1.CALC.6.12E10
P01.150.129-G.180-179-1.180-191-G.180-047-1.180-190-G.180-098-11

K-KAY

DAMPING VALUE = 0.020



10⁰ 10¹ 10² 10³ 10⁴ 10⁵ 10⁶ 10⁷ 10⁸ 10⁹ 10¹⁰

5-11-79

9 FEB 1988

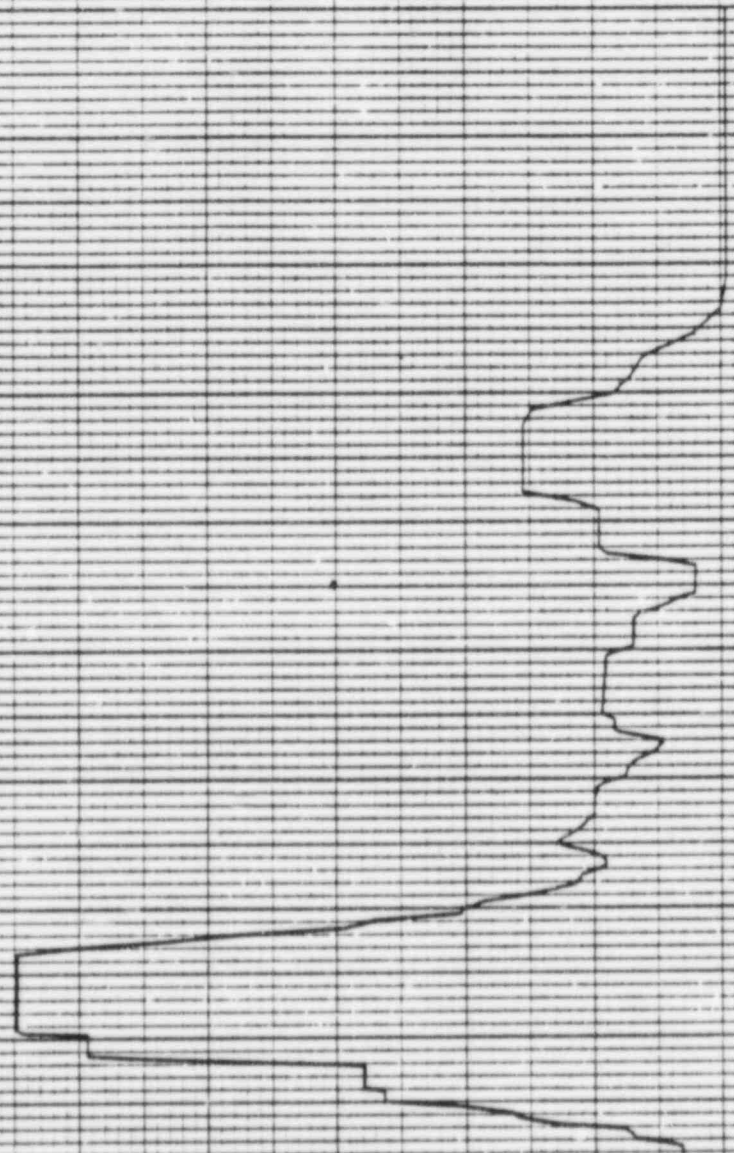
SPECTRA VER DI LEV 08
 FRUITED CONDITION
 DULF STRVES UTILITIES-RBS UNIT 1-CALC12210-AN(C)-60E-1903 REY(1)
 RRS OF REC-REACTOR BLDG., EL-153.27, MASS-05 SEIS MODEL-6MFLD 0L08
 PERK SPREADL-20Z-25Z SEISMIC-1-15Z HYDRODYNAMIC
 DISK CURVE SET NO. 8
 VER DIRECTION

K.ARY

DAMPING VALUE = 0.080

NOTE: MASS M 282.6M(6937.7Y), (8V, NYICO), (NYICMD, 60.74, MP), (CALC 6-112210-
 281.9 130.374-0.180-229-1.180-141-0.180-517-1.180-136-9.120-284-1)

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80



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

9 FEB 1985

K. KRY

DAMPING VALUE = 0.001

PSPECTRA VER DE LEY DB
DULF STAVES UTILITEES-RBS UNIT 1-CALCULATED-NR(C)-SDE-1983 REV 11
RFS OF REC.-REACTOR BLDG.-ELE-158-32, MASS-05, SEIS MODEL--SHIELD BLDG
PERK SPREAD--DDE.+25% SEISMIC.+15% HYDRODYNAMIC

HDR DIRECTION

NOTE: BASE OF GZ-GENVIBR97.1PM.18V.BRVC01+RMTI CMBP-CG 275.0071, CALC. R412210-
R41-1340-184-0-180-089-1, 180-91-0, 180-047-1, 180-136-0, 80-588-17

DISK CURVE SET NO.-N

ACCELERATION 0 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00

FREQUENCY IN HZ 10^0 2 3 4 5 6 7 8 9 10



634A

9 FEB 1963

A. KRY

DAMPING VALUE = 0.020

SPECTRA VER 01 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CALC 12210-MN CI-59E-1903 REV111
 RMS OF ACC.-REACTOR BLDG., EL=173.65, MASS 106 SEIS MODEL-SHIELD BLOB
 PEAK SPREAD -20% ± 25% SEISMIC. ± 15% HYDRODYNAMIC
 DISK CURVE SET NO. 5
 NOTE: BASE IS ONE (ENVISARV17.CY.16V.BEVCA). DMLC 8-12110-
 201.130.124-0.120-128-1.110-111-01

HOR DIRECTION

ACCELERATION G

FREQUENCY IN HZ

5.678910²

3

2

1

0

1

2

3

4

5

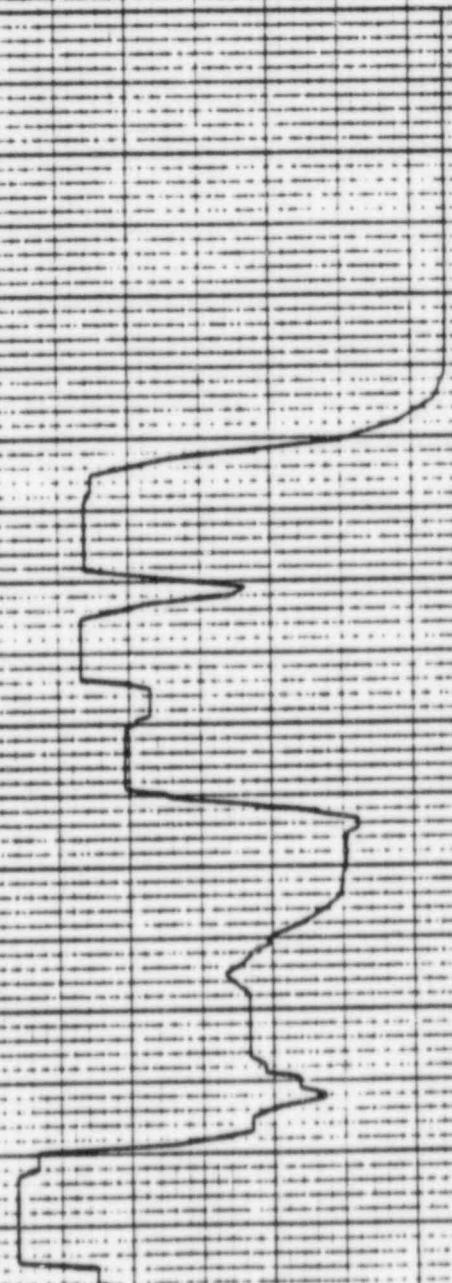
6

7

8

9

10



675A

9 FEB 1983

K. KAY

DAMPING VALUE = 0.020

UPSET CONDITION

1-CALC 12210-NR(C)-SDE-1903 REV(11)

MASS=06 SEIS MODEL-SHIELD BLDG

15Z HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO. 5

NOTE: MASS OF ONE ENGINE 114,270 LB. (51,400 KG). (MC 8-11118)

701-130-124-0-120-129-1-120-131-03

PSPECTRA VER 01 LEV 08

GULF STATES UTILITIES-RBS UNIT 1-CALC 12210-NR(C)-SDE-1903 REV(11)

RBS OF ACC.-REACTOR BLDG. EL=175.65 MASS=06 SEIS MODEL-SHIELD BLDG

PEAK SPREAD -20%+25% SEISMIC. 1-15Z HYDRODYNAMIC

VER DIRECTION

NOTE: MASS OF ONE ENGINE 114,270 LB. (51,400 KG). (MC 8-11118)

701-130-124-0-120-129-1-120-131-03

2.80

2.40

2.00

1.60

1.20

0.80

0.40

0.00

ACCELERATION G

10⁰

2 3 4 5 6 7 8 9 10

10⁰

2 3 4 5 6 7 8 9 10

FREQUENCY IN HZ



PSPECTRA VER 01 LEV 08

FAULTED CONDITION

8 FEB 1983

GULF STATES UTILITIES-RBS UNIT 1-CALC(2210-NMCI)-SQE-1903 REV(11)
RBS OF ACC.-REACTOR BLDG., EL=179.65, MASS=06 SEIS MODEL-SHIELD BLDG
PEAK SPPRAD -201.25% SEISMIC.-152 HYDRODYNAMIC.

DISK CURVE SET NO.5

HOR DIRECTION

DAMPING VALUE F 0.020

NOTE: MASS BY MKZ-COVS(8V1V.EV,18V,88VCO),SERVICHPD.CO.PS.MP1.CALC.4-12210-
P01.130-12-0.120-120-1, 120-111-0.120-047-1.120-130-0.120-044-1)

ACCELERATION
0 0.50 1.00 1.50 2.00 2.50 3.00 3.50

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

3/9A

5.17

9 FEB 1963

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

GULF STATES UTILITIES-RBS: UNIT 1-CALC12210-MMIC1-50E-1903 REV(1)
RBS OF ACC.-REACTOR BLDG.-EL-173.65, MASS=06 SEIS MODEL-SHIELD BLDG
PEAK SPREAD -20%+25% SEISMIC.P-15% HYDRODYNAMIC

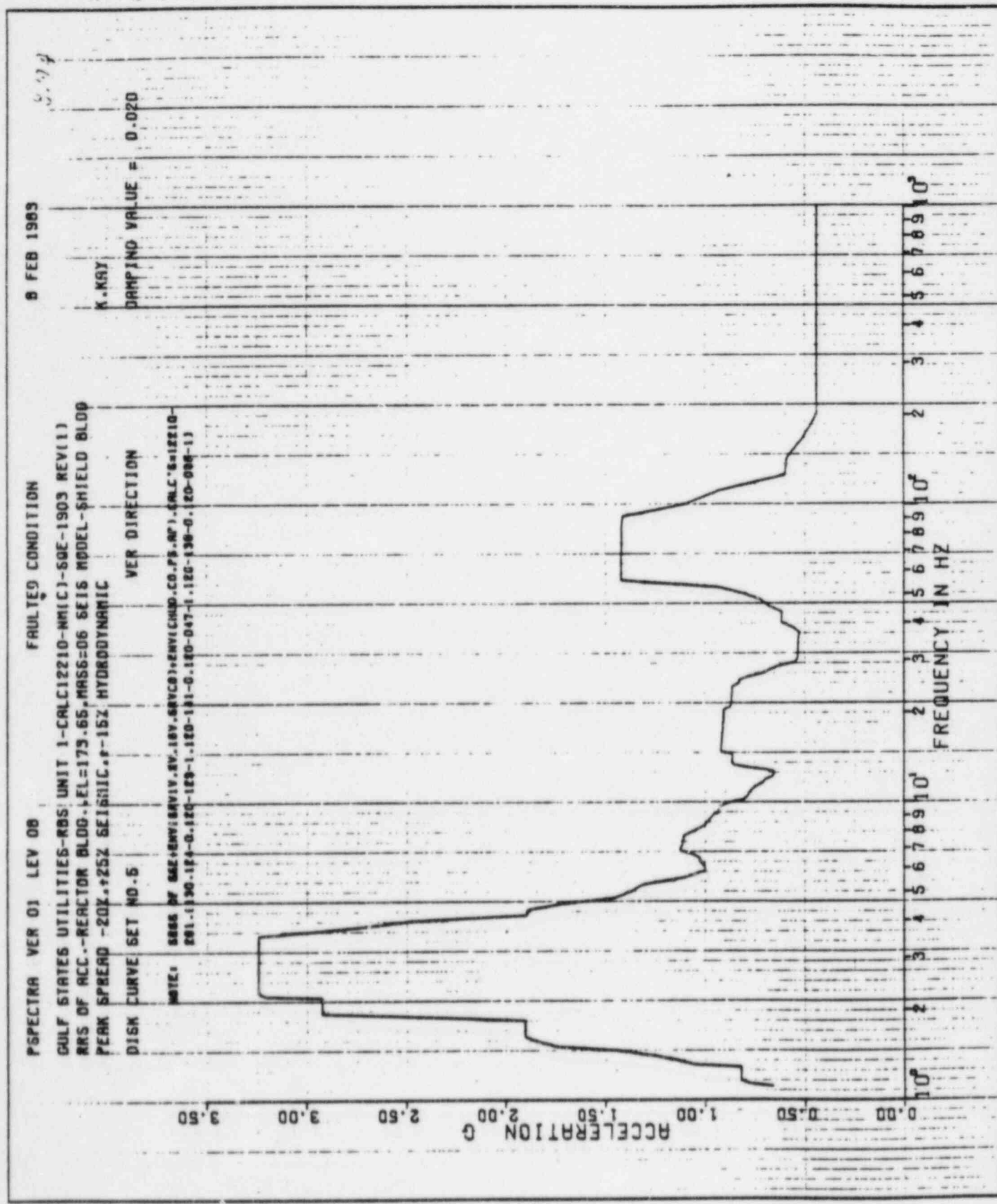
DISK CURVE SET NO-5 VER DIRECTION

NOTE: SSES OF SAE+ENV:SAVIV.RV.18V.8RVCB)+ENV:CHSD.CO.FP.AP).SMLC'S+12210-
281.1190-1P4-0.120-123-1.120-131-0.120-047-1.120-138-0.120-088-13

K.KAY
DAMPING VALUE = 0.020

ACCELERATION G

FREQUENCY IN HZ



9 FEB 1968
K. KRY
DAMPING VALUE = 0.050

FRUITED CONDITION
SPECIMEN VER 01 LEV 08
GULF STATES UTILITIES-RDS UNIT 1-CALC12210-MM C1-50E-1903 REV 11
RMS OF ACC.-REACTOR BLDG.-4FL179.65 MASS-06 SEIS MODEL-SHIELD BLDG
P-RK SPREAD -20Z-425Z SEISMIC-1-15Z HYDRODYNAMIC
DISK CURVE SET NO.5
VER. DIRECTION

NOTE: NAME OF OPERATING UNIT IS SHOWN IN THE TITLE OF THE FILE.
FILE NAME: 21-0-120-129-11-12-31-0-110-DAT-1-1-0-130-0-10-0-0-17

ACCELERATION
2.00
1.50
1.00
0.50
0.00



FREQUENCY IN Hz
10^7
10^6
10^5
10^4
10^3
10^2
10^1

147 23

8 FEB 1988

SPECTRA VER DI LEV DB
 DULF STATES UTILITY-885 UNIT 1-CALCIPID-MNICH-50E-1903 REV117
 RES OF REC.-REACTOR BLDG.-EL-179-55, MASS-06 5216 MODEL-SHIELD BLDG
 PERK SPRERW.-PDK.-75K SET SML.-15Z HYDRODYNAMIC
 DISK CURVE SET NO.5

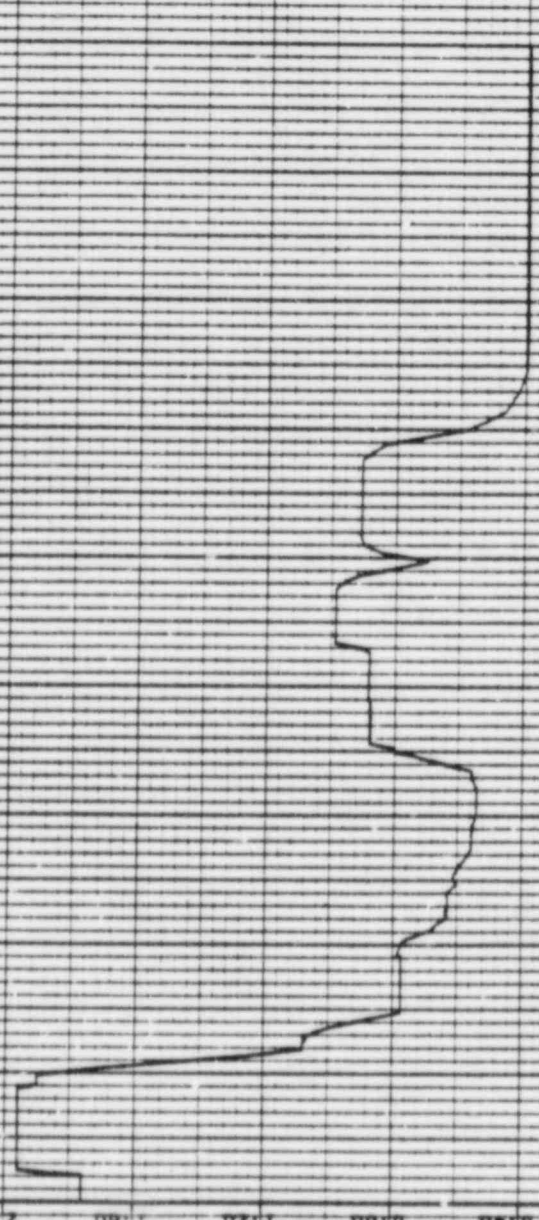
HDR DIRECTION

MTC: 2888 OF 6212016017, RV. 18V, 81VCO, 11V120, CO. 75, MP, CAL. 612216-
 2881-130-17, 180-188-11, 180-111-0, 180-091-1, 180-130-0, 180-090-13

K.KRY
 DAMPING VALUE = D.DMD

FRUITED CONDITION

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80



10⁰ 2 5 + 5.570910¹ 2 5 + 5.570910² 2 5 + 5.570910³ 2 5 + 5.570910⁴

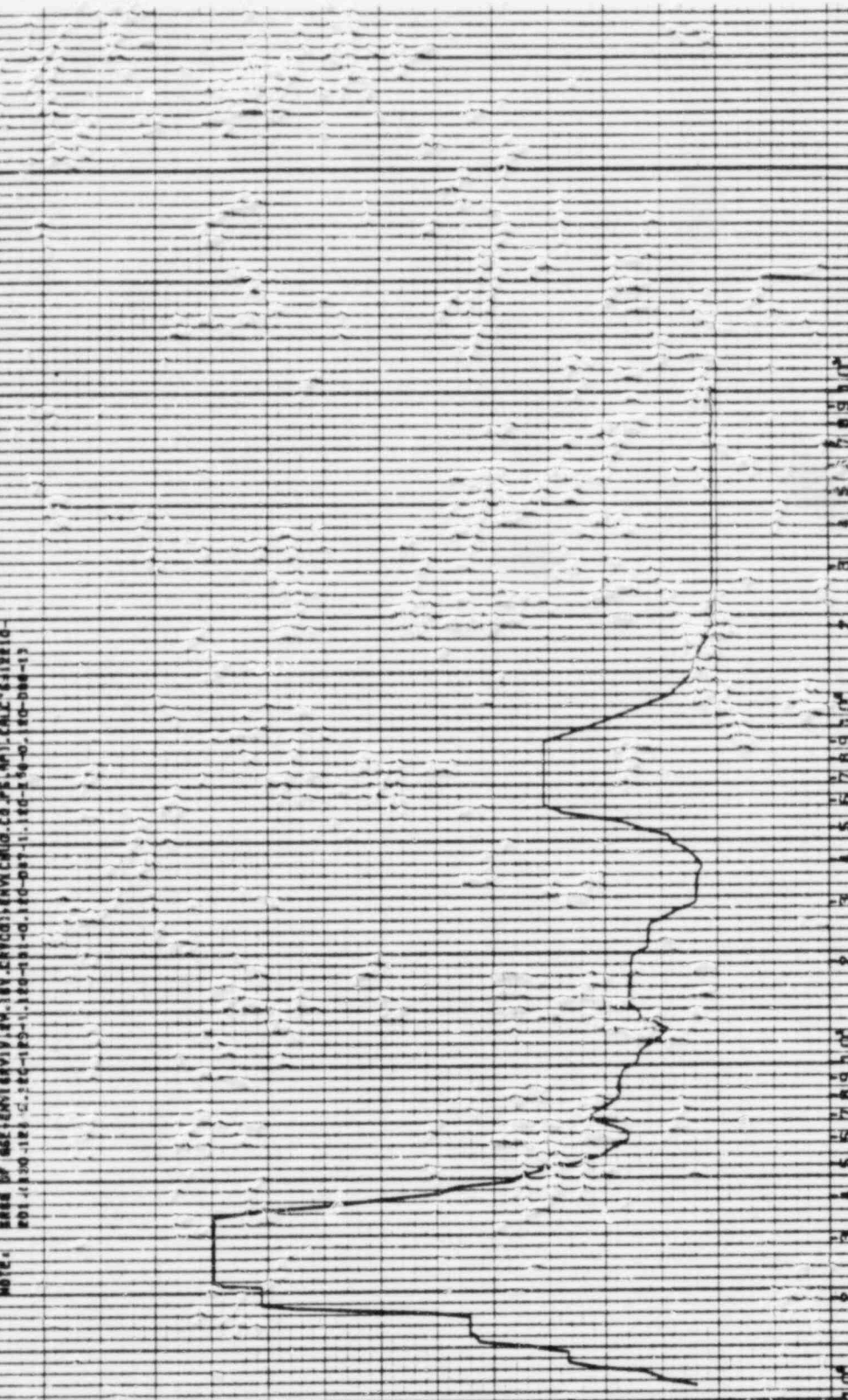
FREQUENCY IN HZ

9 FEB 1987
 K. KRY
 DAMPING VALUE = 0.0001

SPECTRA PER DA: LEV DB FAILED CONDITION
 DALL STATES UTILITIES-RBS UNIT 1-CALC 2200-NM1C7-50E-1903 (REV 1)
 RMS OF ACC.-REACTOR BLDG-LEL-179-55-RR55-05 SENS MODEL-SHIELD BLDG
 PEAK SPREAD -20Z-25Z SEISMIC-2-15Z HYDRODYNAMIC
 DISK CURVE SET NO. 5 VER DIRECTION

NOTE: RMS OF ACC-ENVIRONMENTAL BY ENVIRONMENTAL CONTROL SYSTEMS
 201 (100-12) C-20-179-11-100-131-G-100-001-11-100-110-0-100-000-13

ACCELERATION 0 0.50 1.00 1.50 2.00 2.50



10^0 10^0.5 10^1 10^1.5 10^2
 FREQUENCY IN HZ

677A

9 FEB 1983

K. KAY

DAMPING VALUE = 0.020

PSPECTRA VER. D1 LEV. DB
 DULF STATES UTILITIES-RBS UNIT 1-CALC12210-NMICJ-50E-1903 REV11
 RRS OF ACC.-REACTOR BLDG., EL-189.88, MASS-07.5E16 MODEL-5HIELD BLDG
 PEAK SPREAD -20%, *25% SET5MIC, *15% HYDRODYNAMIC
 DISK CURVE SET NO. 5

UPSET CONDITION

HOR DIRECTION

NOTE: MASS OF CORE (MVIC) = 24,160,589CGM, CAL# 8-12816-
 201,130,121-0.120-128-1.120-11-01

ACCELERATION - G

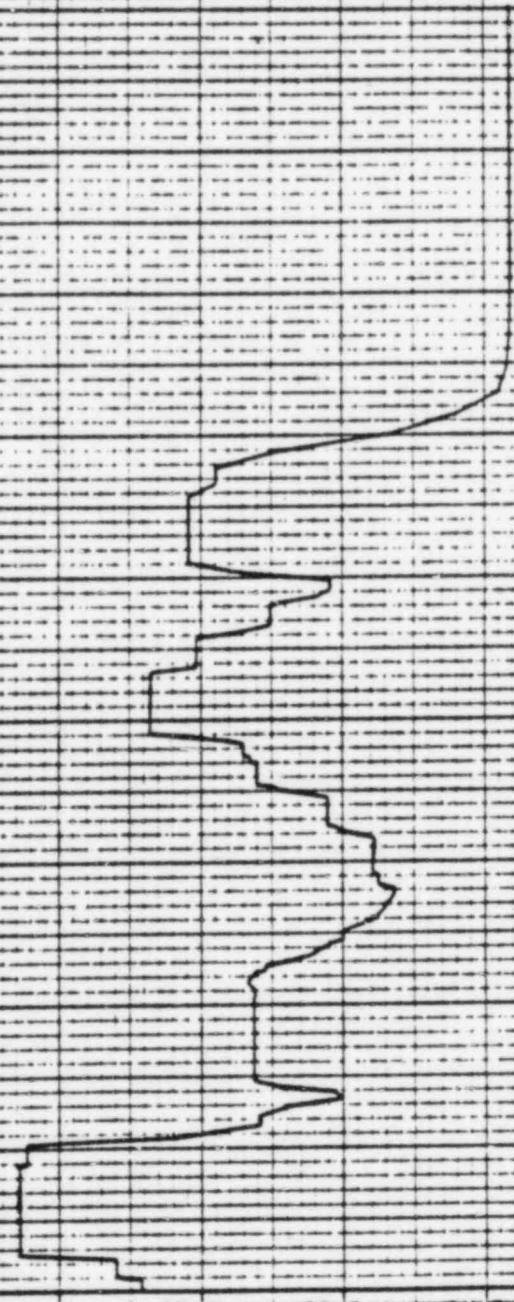
FREQUENCY IN HZ

10⁰
1
2
3
4
5
6
7
8
9
10

10⁰
1
2
3
4
5
6
7
8
9
10

10⁰
1
2
3
4
5
6
7
8
9
10

2.00 2.00 2.00 1.50 1.20 0.80 0.40 0.20



677A

9 FEB 1968

K. KAY

DAMPING VALUE = 0.020

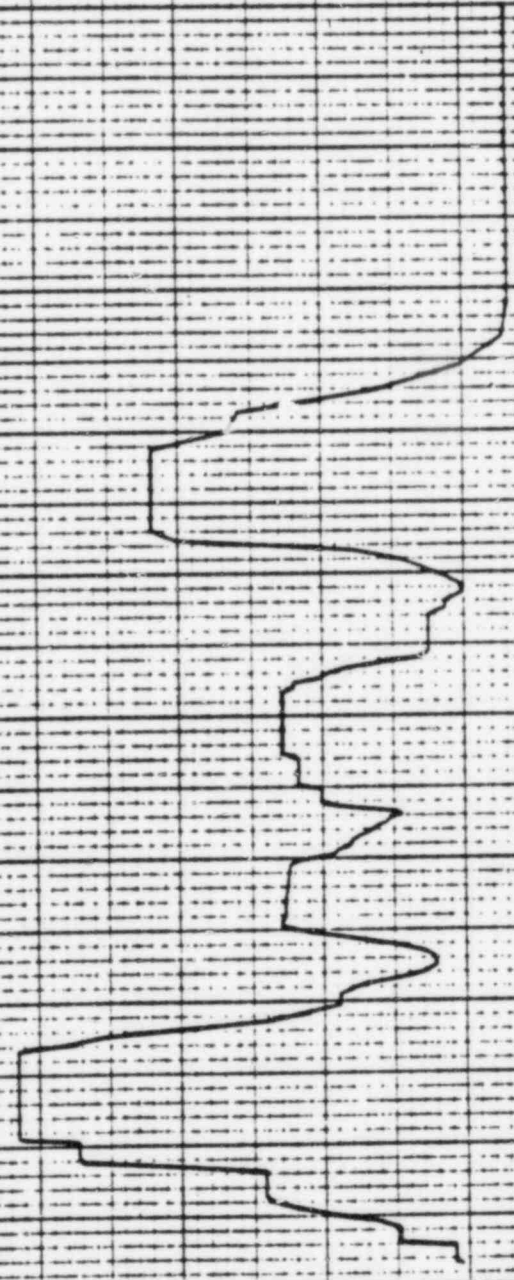
SPECTRA VER 01 LEV 08
 CULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM(C)-50E-1903 REV111
 NR OF ACC.-REACTOR BLDG. ELE189.88 MASS E07 5E16 MODEL-SHIELD BLOC
 PEAK SPREAD -20Z-25Z. 5E16MIL. 1-16Z. HYDRODYNAMIC
 DISK CURVE SET NO. 6
 VER. DIRECTION

NOTE: MASS OF ONE ENVI58VIV SV.16V.3AVCO). CAL. 6-12210-
 291-1396-125-0.120-120-1.120-131-01

ACCELERATION G

FREQUENCY IN HZ

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



500A

8 FEB 1983

FAULTED CONDITION

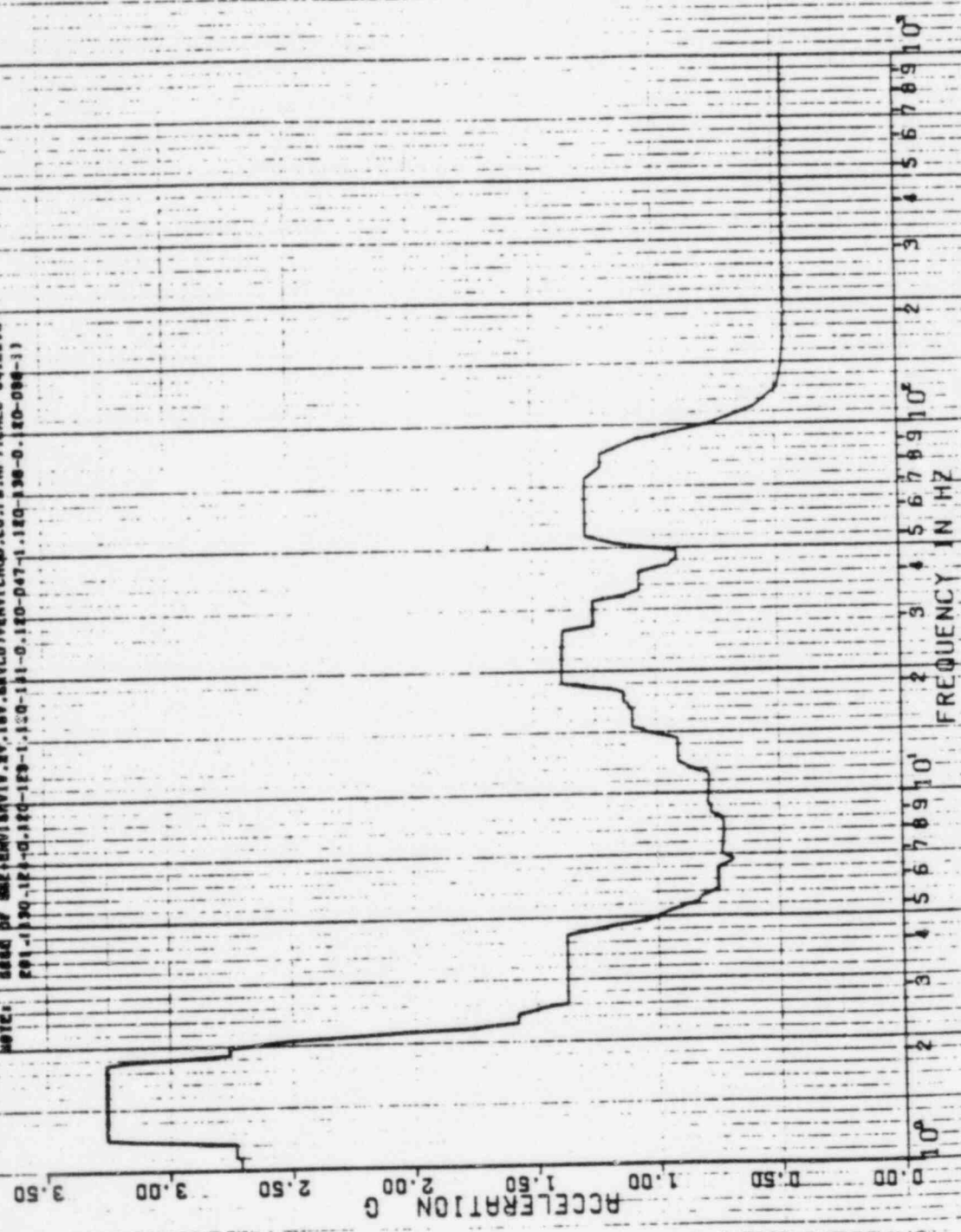
PSPECTRA VER 01 LEV 08

GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM(C)-50E-1903 REV(1)
RRS OF ACC.-REACTOR BLDG., EL=193.98, MASS=07 SEIS MODEL-SHIELD BLDG
PEAK SPREAD -20X.+25X SEISMIC.P-15Z HYDRODYNAMIC

D16K CURVE SET NO.6 MOR DIRECTION

NOTE: 0000 OF 002+ENVISIVV.SY, 18V.SRVCO)+ENVICHD.CO.PS.RP).CALC'6+12210-
P01-130-123-0-120-123-1.120-121-0-120-120-1.120-120-0-120-088-1)

K.MAY
DAMPING VALUE = 0.020



10⁰ 10¹ 10²
2 3 4 5 6 7 8 9 10
2 3 4 5 6 7 8 9 10
3 4 5 6 7 8 9 10

5014

8 FEB 1983

PSPECTRA VER 01 LEV 08

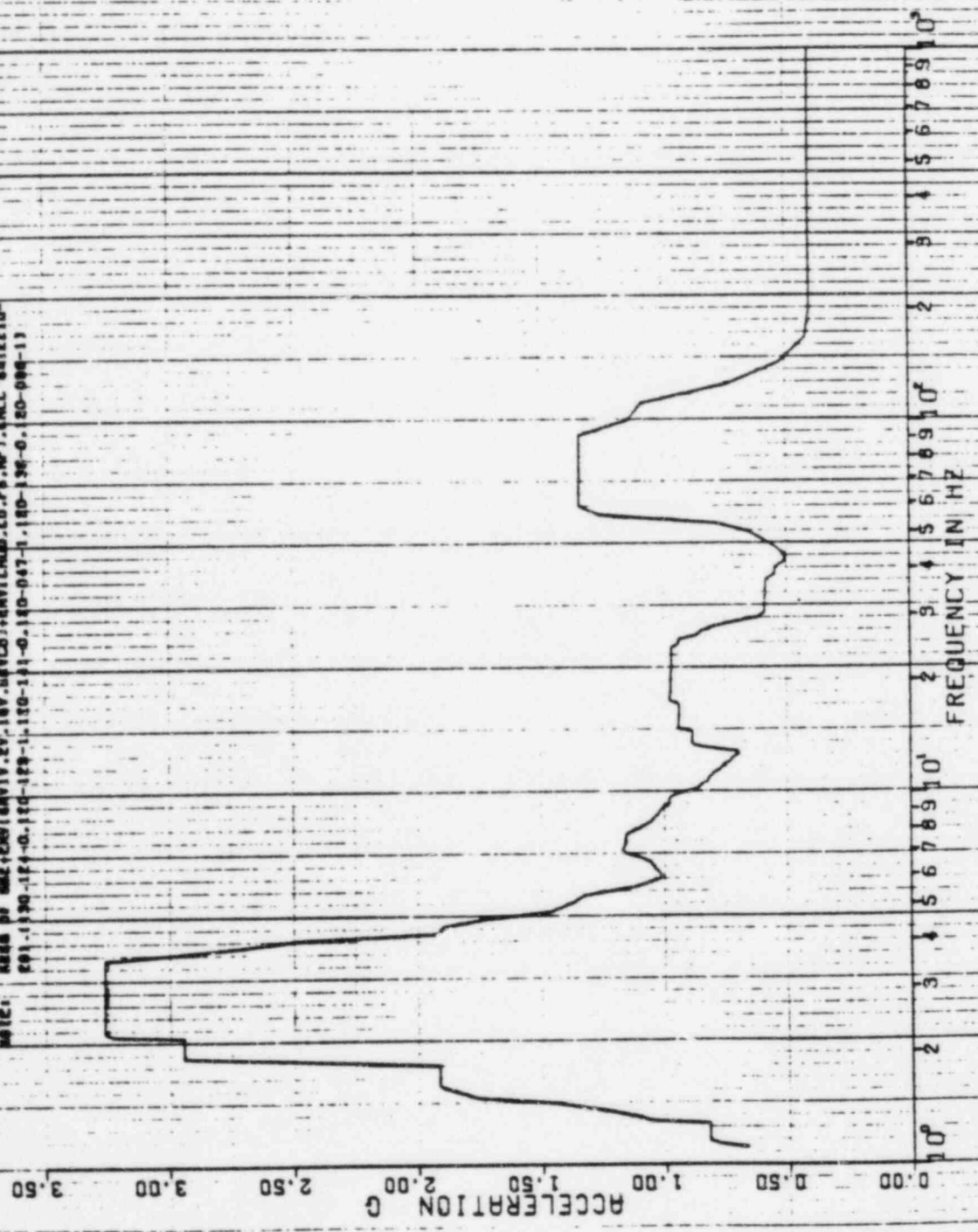
FAULTED CONDITION

DULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM(C)-60E-1903 REY(1)
RRS OF ACC.-REACTOR BLDG., EL=193.88, MASS=07 SEIS MODEL-SHIELD BLDG
PEAK SPREAD +20% +25% SEISMIC. +15% HYDRODYNAMIC

DISK CURVE SET NO. 6 VER DIRECTION

NOTE: RBS OF 002+001/001V.EV.10V.00VCO;+00VICHMP.CO.PS.MP). (CALC 6=12210-
001.1190.1E+0.120-129-1.110-1.11-0.120-047-1.120-136-0.120-000-1)

K-KAY
DAMPING VALUE = 0.020



FREQUENCY IN HZ

1078

9 FEB 1965

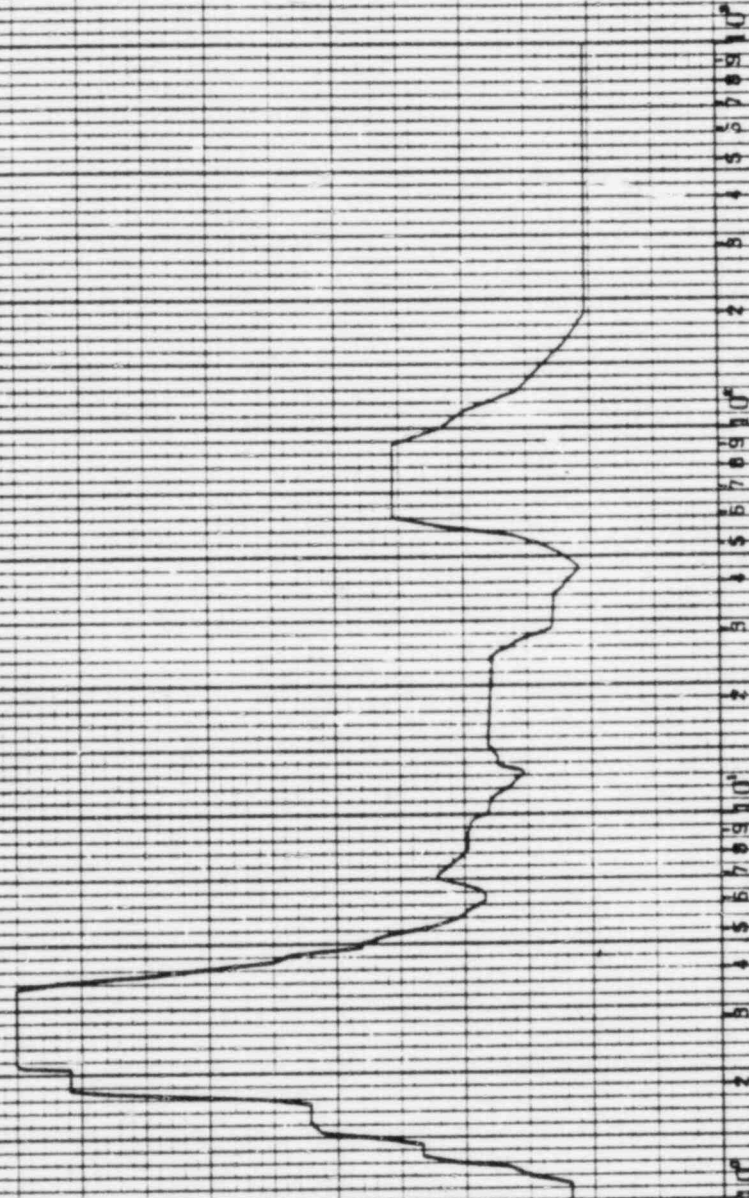
SPECTRA VER DA LEV DB
 DULF STATES UTILITY REACTOR UNIT 1-CALC 12210-NM C3-50E-1809 REV 11
 RES OF ACC-REACTOR BLDG-FL-109-98, M655-07 SE16 MODEL-SHIELD BLOB
 PERK SPREAD -20Z-225K. 5E16MTC. 1-15Z HYDRODYNAMIC
 DISK CURVE SET NO. 5
 VER DIRECTION

KARRY

DAMPING VALUE = 0.000

NOTE: 8866 OF USE 100118VAVY, REV. 104, 581601, INVECHUD, CO, P, 01, CASE 8-12210-
 701-1190-121-0, 120-311-0, 120-547-1, 120-196-0, 120-088-13

ACCELERATION G
 2.00
 1.50
 1.00
 0.50
 0.00



10⁰ 10¹ 10² 10³ 10⁴ 10⁵ 10⁶
 FREQUENCY IN HZ

671A

8 FEB 1983

L. KAY

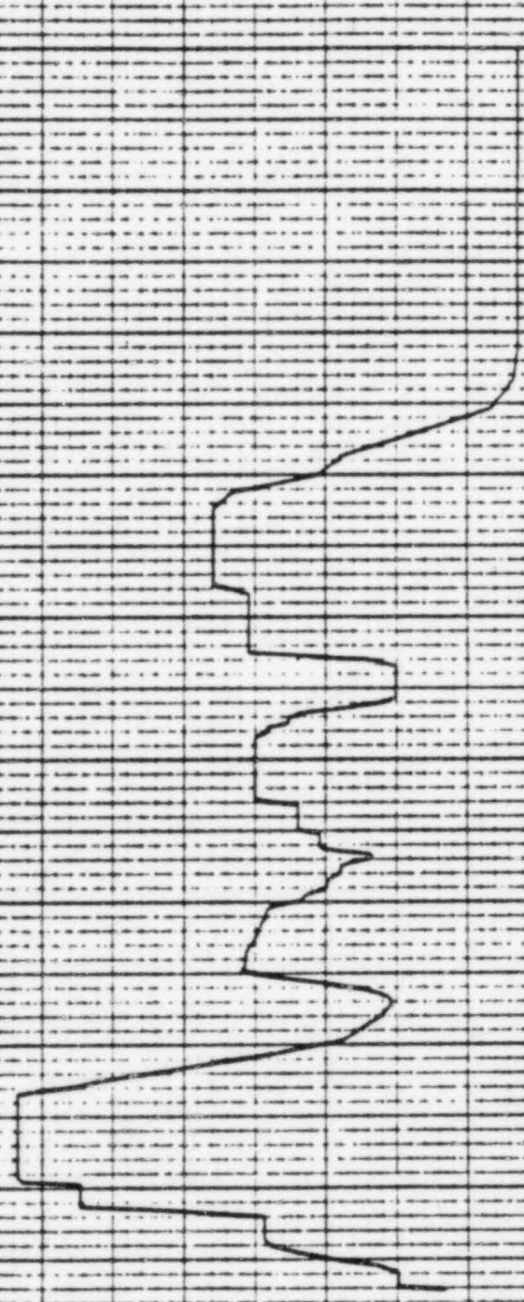
DAMPING VALUE = 0.020

PSPECTRA VER. 01 LEV. 08
 GULF STATES UTILITIES-RRS UNIT 1-CALC12210-NM(C)-SDE-1903-REV113
 RRS OF ACC.-REACTOR BLDG.-EL214.31 MASS500 SEIS MODEL-SHIELD BLDG
 PEAK SPREAD -20% ± 25% SEISMIC. -15% HYDRODYNAMIC
 DISK CURVE SET NO. 7
 UPSET CONDITION
 VER. DIRECTION

NOTE: BASE OF ONE (CMVISA)IV, 2V, 16V, 80V(CO), CML' 412210-
 801-136-121-0.120-129-1.120-131-0)

ACCELERATION 0 0.80 1.60 2.40 2.80

FREQUENCY IN HZ



10^0 2 3 4 5 6 7 8 9 10^1 2 3 4 5 6 7 8 9 10^2

2324

8 FEB 1983

PSPECTRA VER 01 LEV 08

FAULTED CONDITION

GULF STATES UTILITIES-R05 UNIT 1-CALC12210-NMIC)-50E-1903 REV(1)
RRS OF ACC.-REACTOR BLDG.-EL=214.31, MASS=08 SEIS MODEL-SHIELD BLDG
PEAK SPREAD -20%, 25% SEISMIC.F-15% HYDRODYNAMIC

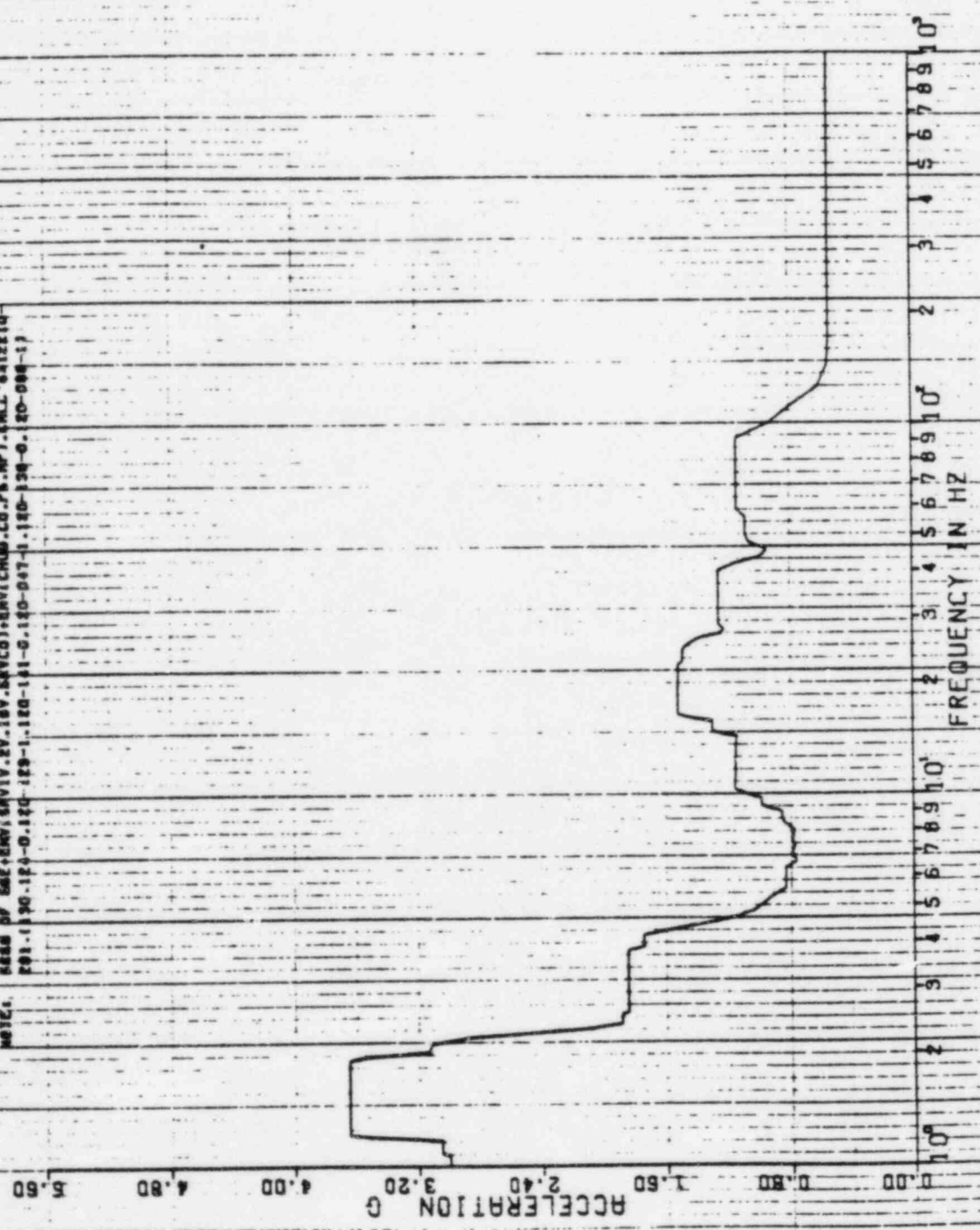
DISK CURVE SET NO.7

HOR DIRECTION

NOTE: RRRS OF 50E+ENVISARVIV.2V.10V.GRVCO)+ENVICHD.CG.PS.AF).CALC.6.12210-
201.1130.120-0.150-1.120-1.11-0.110-0.17-1.120-1.30-0.120-0.00-1)

K.KRAY

DAMPING VALUE = 0.020



5-3-A

8 FEB 1983

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

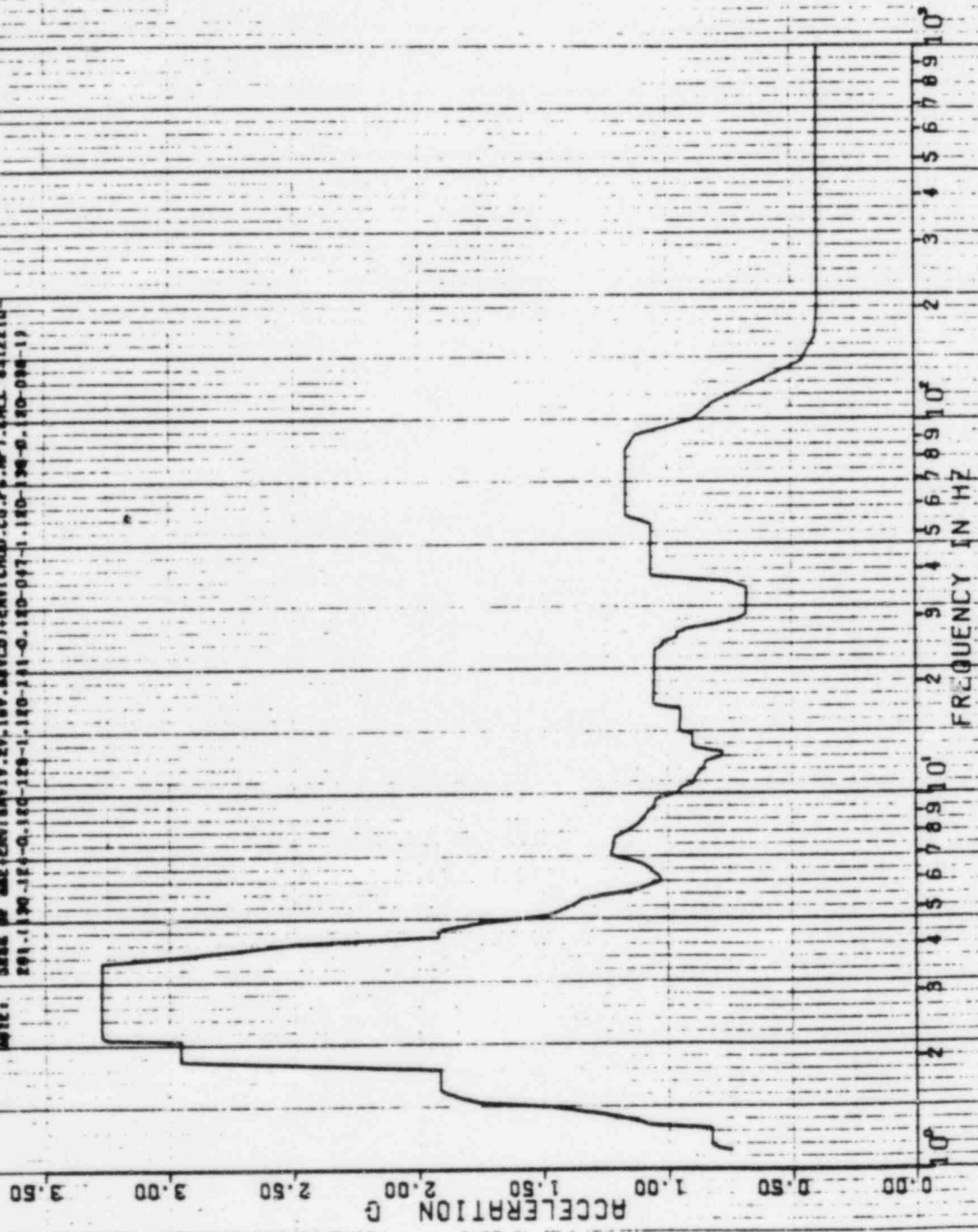
GULF STATES UTILITIES-RBS, UNIT 1-CALC12210-MMIC1-50E-1903 REV(1)
RMS OF ACC.-REACTOR BLDG., EL=214.31, MASS=08 5E16 MODEL-SHIELD BLDG
PEAK SPREAD -20X.25X SEISMIC.†-15Z HYDRODYNAMIC

DISK CURVE SET NO. 7 VER DIRECTION

NOTE: 2886 OF ARE (ENVIRNIV.27,18V,88VCD)+ENVICHD.CO.PF.MF).CALC-5412210-
291-130-124-0.180-128-1.180-191-0.180-097-1.180-138-0.180-098-19

DAMPING VALUE = 0.020

K.KRAY



FREQUENCY IN HZ

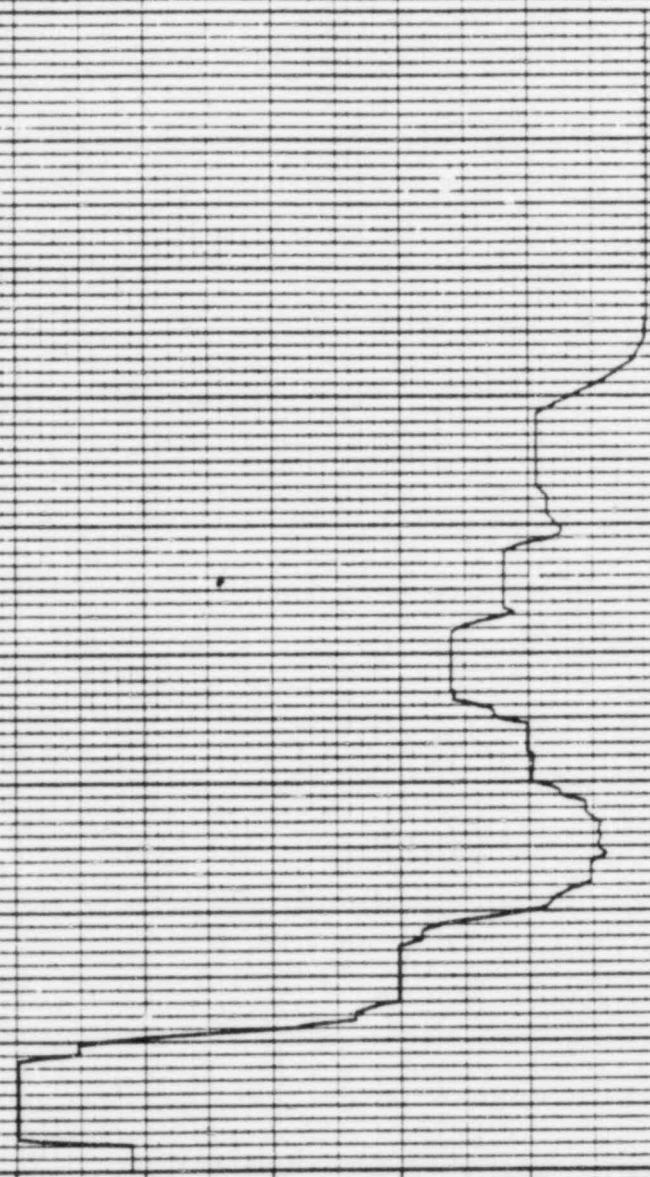
8 FEB 1985
5:57 A

SPECTRA VER. 01 LEV DB
DULF STATES UTILITIES-R05 UNIT 1-CALC12210-N11C1-S0E-1903 REV11
MRS OF ACC.-REACTOR BLDG.-ELE-F11-31, MASS-08 6E16 MODEL-SHIELD BLDG
PERK SPREAD -20K.25Z.6E16N1C.1-15Z HYDRODYNAMIC
DISK CURVE SET NO.7
HOR DIRECTION

K-KAY
DAMPING VALUE = 0.080

NOTE: 8886 OF 08Z 104100V11 CV, 16V, 88V001+ENV1CH00, 00, 79, 001, CALC, 6-11-81
201 -130 -124 -0.100-124-11.100-111-0.100-001-0.100-130-0.100-000-1

ACCELERATION 0 0.50 1.00 1.50 2.00 2.50 3.00 3.50
FREQUENCY IN HZ 2 3 4 5 6 7 8 9 10



17514

9 FEB 1969

SPECTRA VER DI LEV 06
 FAULTED CONDITION
 DUFF STRIES UTILITIES-RBS UNIT 1-CALCIPPID-WN(C)-50E-1903 REY(1)
 RMS OF ACC-REFLECTOR BLDG., EL-218.91, MASS=08 5E16 MODEL-SMIELD 0108
 PEAK SPREAD =20X.525X SEISMIC.+-15Z HYDRODYNAMIC
 DISK CURVE SET NO.7
 VER DIRECTION

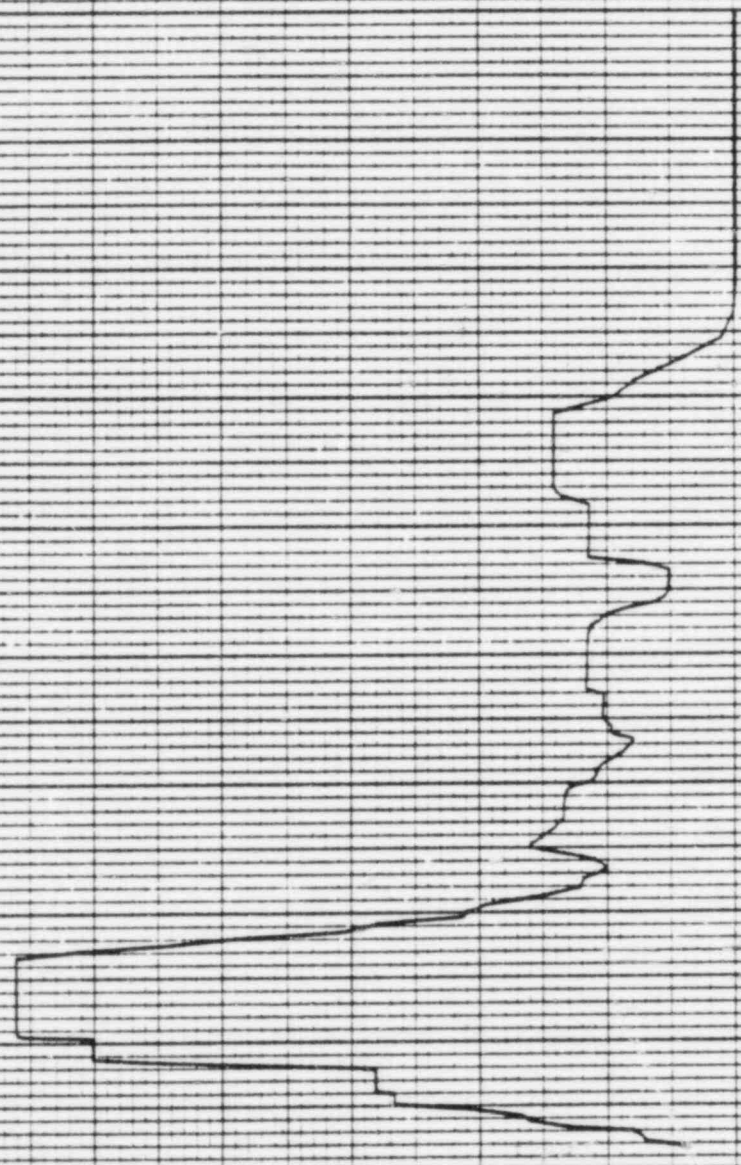
KARY

DAMPING VALUE = 0.080

NOTE: BASE AT 502.6W/68V17, PV, 18V, 58V(00)+EMVIC-ND, CO, PS, AP1, (ALL) 6.172(10)
 201-1130-174-0.120-129-0.120-131-0.120-131-1.120-130-0.120-130-1)

ACCELERATION G

2.80 2.40 2.00 1.60 1.20 0.80 0.40 0.00



10^0 2 3 4 5 6 7 8 9 10^1 2 3 4 5 6 7 8 9 10^2

FREQUENCY IN HZ

1/19 #

9 FEB 1985

FAULTED CONDITION

SPECTRA VER D1 LEV DB

DULF STATES UTILITIES-KBS ONLY 1-CALC 12210-NR1CY-502-1909 REV 1.17
RRS OF ACC.-REACTOR BLDG.-EL-216.31, NR66-08 SE16 MODEL-SHIELD BLDG
PEAK SPREAD -2DK. 425K SEISMIC. 1-15Z HYDRODYNAMIC

DISK CURVE SET NO. 7 VER DIRECTION

K-KRY

DAMPING VALUE = 0.000

NOTE: 8866 OF 88Z 24M1 88V17 (EV. 16V. 88VCO) HWY1 CHUD. CO. P.S. AM1. CALT 8.12210-
201-1130-1P4-G. 100-112-1. 100-31-0. 100-047-1. 100-136-0. 100-088-1)

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80



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

688A

9 FEB 1988

K. KAY

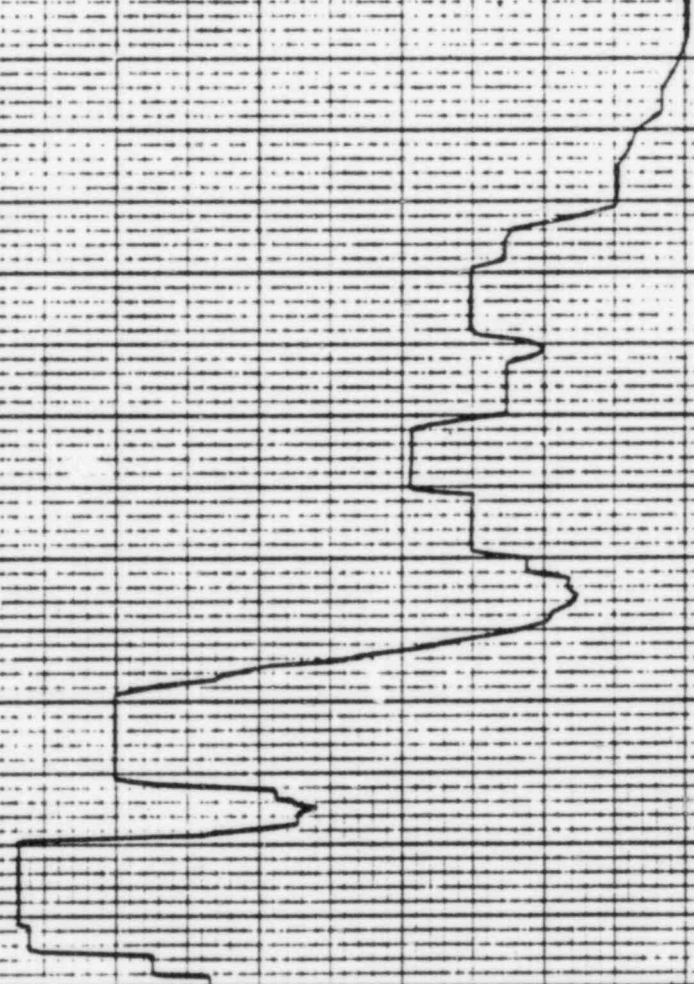
DAMPING VALUE = 0.020

PSPECTRA VER DN LEV DB
 DULF STATES UTJ, JYIES-RBS UNJT 1-CAL C12210-NM CJ-5DE-1903 REV(1)
 NR6 OF ACC.-REACTOR BLDG., EL=2 NB.00, MASS=509 SEIS MODEL-SHIELD BLDG
 PEAK SPREAD -20% .25% SEISMIC .15% HYDRODYNAMIC
 DISK CURVE SET NO. 8
 UPSET CONDITION:
 HOR DIRECTION

NOTE:
 8886 OF 08E/EMIS/RY/14.2V.18V.8VCC3).CAL'6-12R10-
 201-130-128-0-120-128-1-120-131-01

ACCELERATION G

FREQUENCY IN HZ



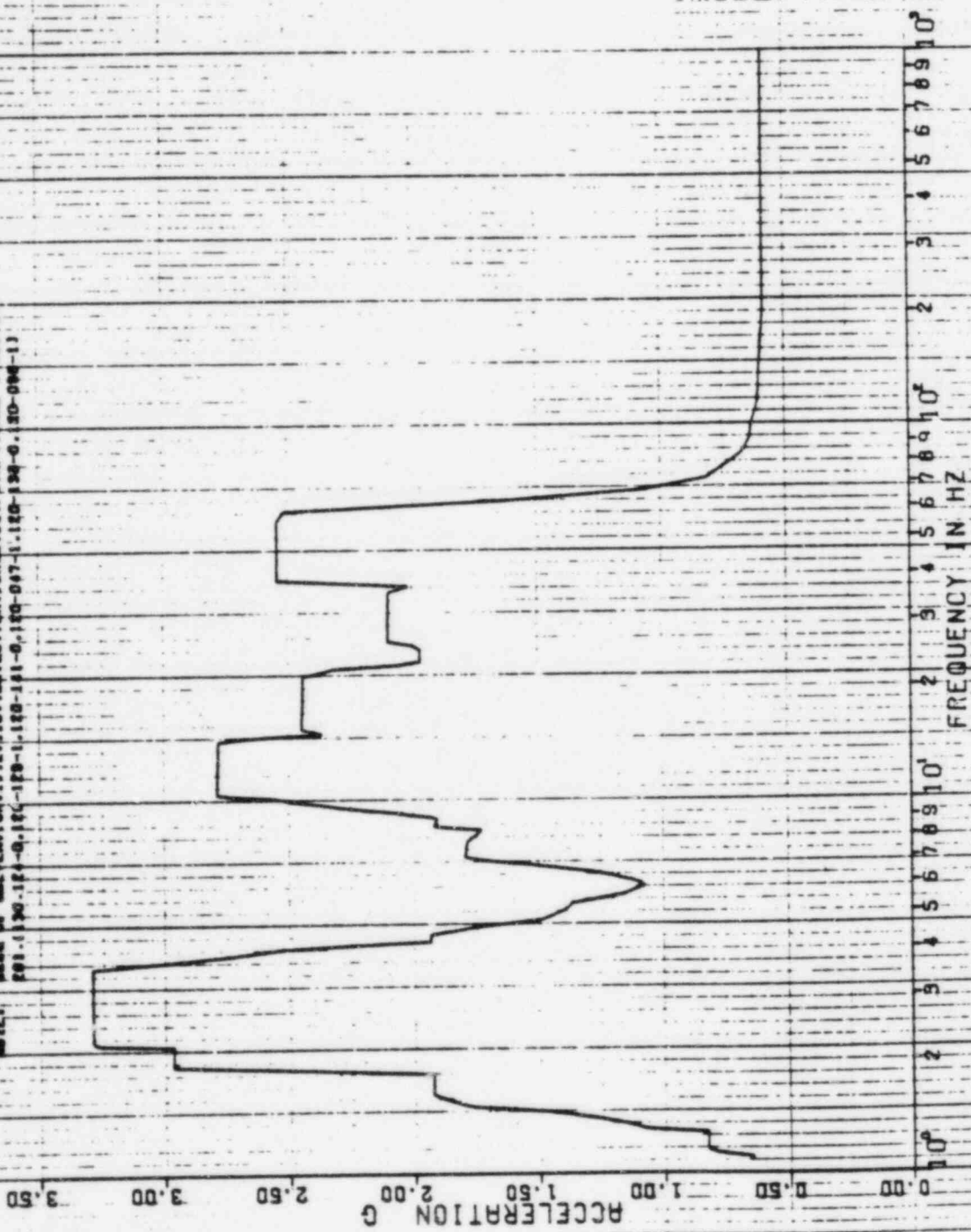
15554
8 FEB 1969

P6SPECTRA VER 01 LEV 08
FAULTED CONDITION
DULF STATES UTILITIES-RBS UNIT 1-CALC12210-NMIC1-50E-1903 REV(1)
RBS OF ACC.-REACTOR BLDG.-EL=240.00, MASS=09 SEIS MODEL-SHIELD BLDG
PEAK SPREAD -20% ±25% SEISMIC.P-152 HYDRODYNAMIC

DISK CURVE SET NO. 8
VER DIRECTION

NOTE: RBSR BY GAZ+ENVI/SEVIV.2V.10V.RBYCO3+ENV/CRAD.CO.FS.MF1.CALC.6-12210-
203-1190-124-0.100-128-1.120-121-0.120-097-1.120-128-0.30-098-13

K.MAY
DAMPING VALUE = 0.020



10⁰ 10¹ 10²
2 3 4 5 6 7 8 9 10
FREQUENCY IN HZ

9/12/4

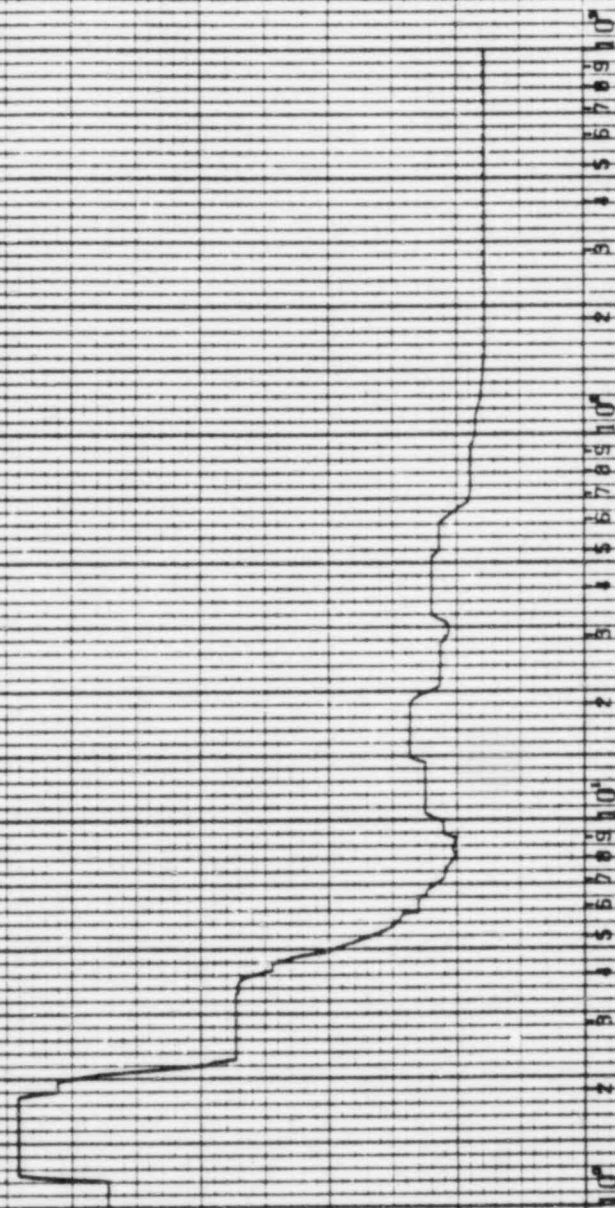
9 FEB 1965

SPECTRA VER 03 LFV 08
 DULF STATES UTILITIES-RBS UNIT 1-CALCATED-NM(C)-SVE-1909 REV(1)
 NRS OF ACC-REACTOR BLDG., EL-200-00, MRSS-09, SEIS MODEL-SHIELD BLDG
 PERK SPREAD-RDK-25K SEISMIC-152 HYDRODYNAMIC
 DISK CURVE SET NO-B
 HMR DIRECTION

K. RBY
 DAMPING VALUE = 0.030

NOTE: AREA OF 652-ENVISERVY 10V. 14V. 20V(C61)-ENVICMB-CO. 78, 80V. CALC. 6-12210-
 201-130-124-0-110-120-31-0-120-DAT-1-110-130-0-140-000-13

5.50
 4.80
 4.00
 3.20
 2.40
 1.60
 0.80
 0.00
 ACCELERATION



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

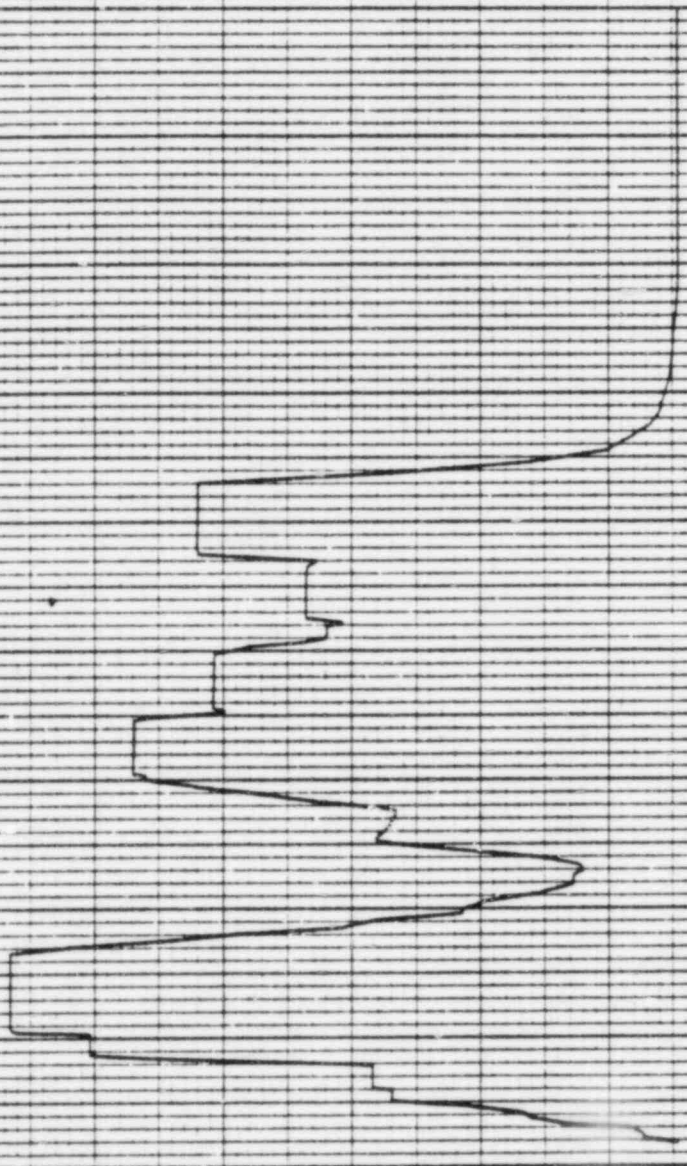
000000

8 FEB 1955
A. RRY
DAMPING VALUE = 0.050

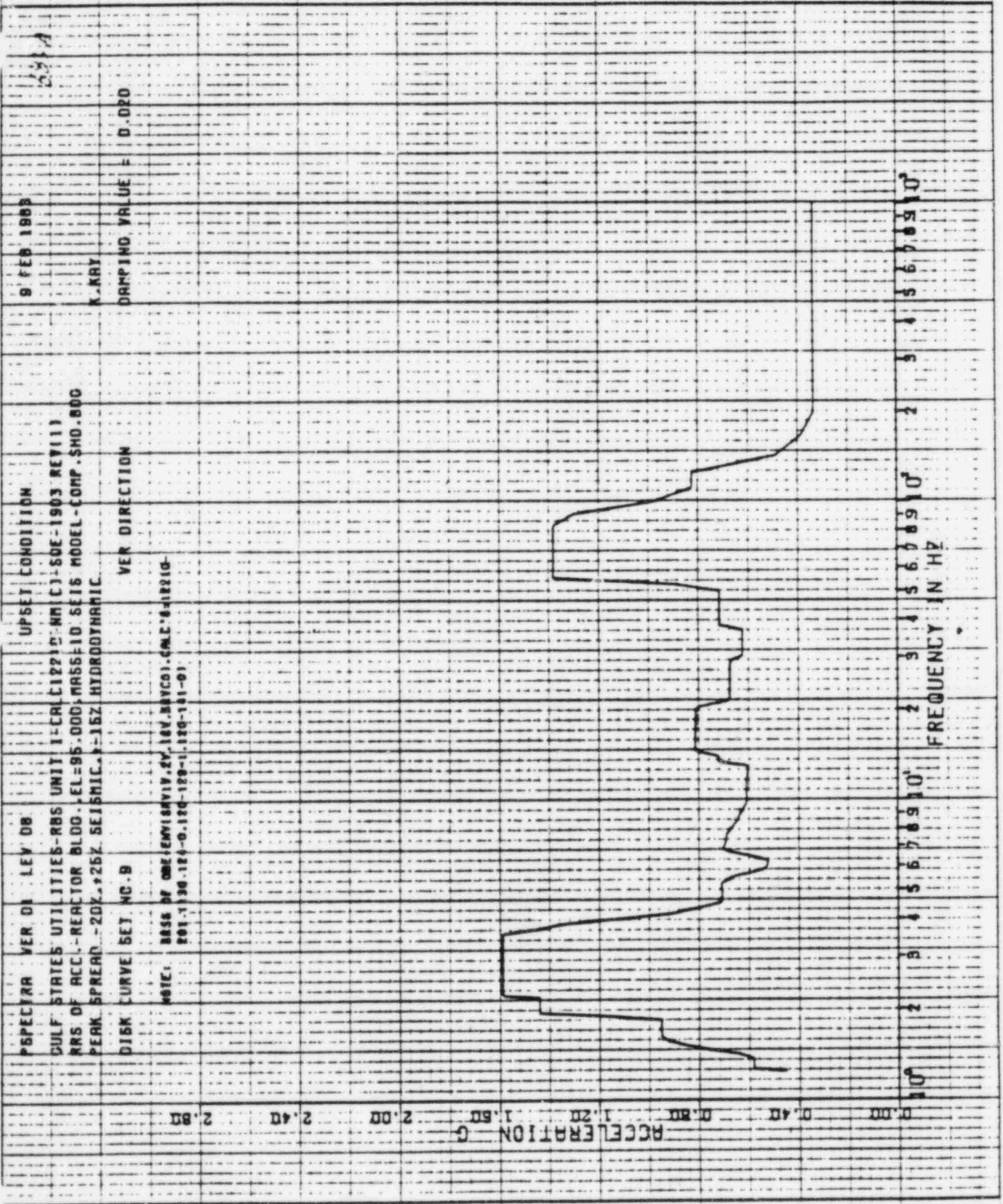
FRUITED CONDITION
SPECTRA VER 01 LEV 08
DULF STATES UTILITIES-RBS UNIT 1-CALC12210-NR1C1-SOE-1903 REV111
RBS OF ACC.-REACTOR BLDG.-FL-200.00/MS5-09 6E16 MODEL-SHIELD BLDG
PERK SPREHD-202.125X SEISMIC.2:152 HYDRODYNAMIC
DISK CURVE SET NO.8
VER. DIRECTION

NOTE: DATA OF 0521000168V17.EV.16V.81VCO16V1CMBD.C6.P1.6P1.6AL1.6.112210-
FOR 130.121-0.140-125-11.140-111-0.140-047-n.140-198-0.140-048-73

RECELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80



10 2 5 9 5 10 2 5 9 5 10 2 5 9 5 10
FREQUENCY IN HZ



9 FEB 1963

K. KRY

DAMPING VALUE = 0.020

P5PECTRA VER 01 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CR112712-NM(C)-S0E-1903 REV111
 MRS OF ACC.-REACTOR BLDG., EL=95.000, MASS=10 SEIS MODEL-COMP. SMO.800
 PEAK SPREAD --20%+25% SEISMIC. --16Z HYDRODYNAMIC
 DISK CURVE SET NC.9
 VER DIRECTION

NOTE: BASE OF OBSERVATION 27.16V.3NVC0). CMLC 6-112210-
 001-136-124-0-124-100-1-120-141-01

FREQUENCY IN HZ

ACCELERATION G

2.80

2.40

2.00

1.60

1.20

0.80

0.40

0.00

10^0

10^1

10^2

1564

8 FEB 1983

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

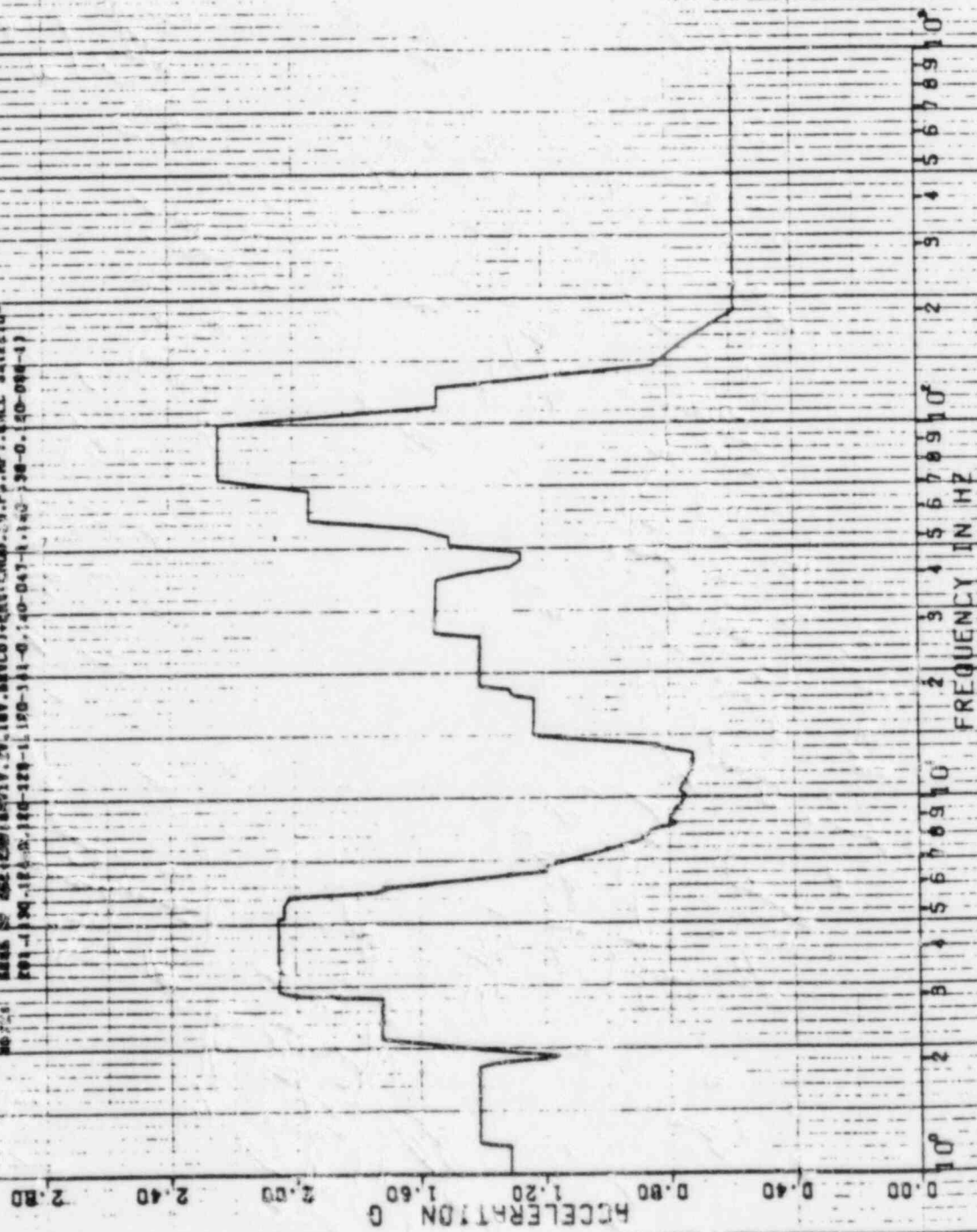
GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NMCI-SOE-1903 REV(1)
MRS OF ACC.-REACTOR BLDG..FL=95.000, MASS=10 615 MODEL-COMP-SHD.800
PERK SPREAD -POY..25% SEISMIC.t=15% HYDRODYNAMIC

DISK CURVE SET NO.9. HDR DIRECTION

NO.26: MRS OF ACC-COMP-REACTOR BLDG..FL=95.000, MASS=10 615 MODEL-COMP-SHD.800
PERK SPREAD -POY..25% SEISMIC.t=15% HYDRODYNAMIC

K.KAY

DAMPING VALUE = 0.020



5274

8 FEB 1983

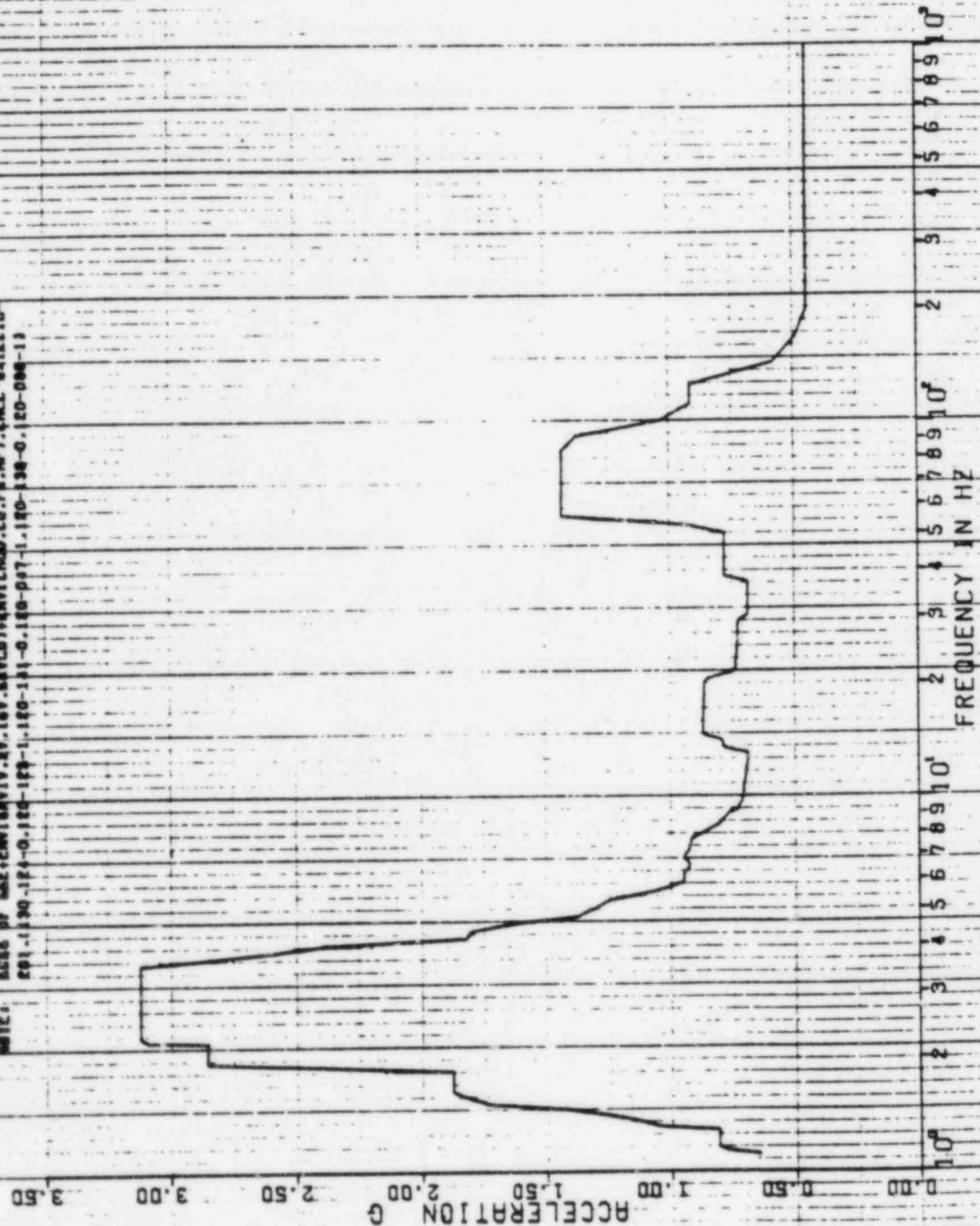
PSPECTRA VER 01 LEV 08 FAULTED CONDITION
 GULF STATES UTILITIES-RGS UNIT 1-CALC12210-NM1C1-60E-1903 REV11
 RRS OF ACC.-REACTOR BLDG.-EL=95.000, MASS=10 SEIS MODEL-COMP-\$MO.800
 PEAK SPREAD -20%+25% SEISMIC.P-15Z HYDRODYNAMIC

K.KAY
DAMPING VALUE = 0.020

VER DIRECTION

DISK CURVE SET NO. 8

NOTE: MASS OF 66212MW18V1V.2V.18V.SVCS1+ENVCMDP.CO.P5.RP1.(CALC 8412210-
 P81.1190-174-0.180-181-0.180-187-1.180-190-0.120-080-1)



5
4
3
2
1
0

5.678910¹
5.678910⁰
5.678910⁻¹
5.678910⁻²
5.678910⁻³
5.678910⁻⁴
5.678910⁻⁵
5.678910⁻⁶
5.678910⁻⁷
5.678910⁻⁸
5.678910⁻⁹
5.678910⁻¹⁰

1/23/64

9 FEB 1964

PROSPECOR VER 01 LEV 08
 GULF STATES UTILITIES-RSS UNIT 1-CALC 12210-AMIC7-50E-1903 REV 11
 RRS DF ACC-REACTOR BLDG-1-EL-85-000-MR65-10 6E16 MODEL-COMP-6ND-800
 PERK SPREAD -20Z-25Z SEISMIC-1-15Z HYDRODYNAMIC
 FRUITED CONDITION

K. KRY

DAMPING VALUE = 0.000

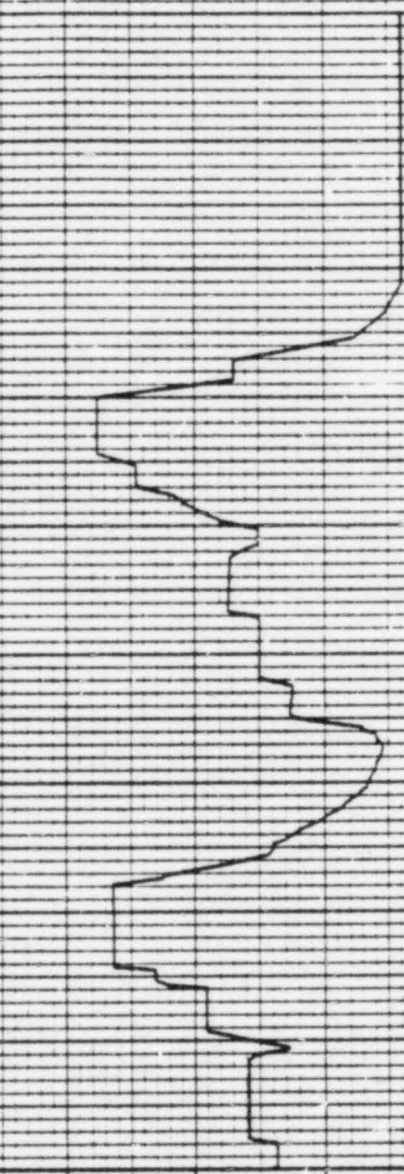
HDR DIRECTION

DISK CURVE SET NO. 9

NOTE: RRSR DF 6E210018V17 (V. 15Z, BAYCO) (MVICRMO-CO. P. 5. 071-CALC-6. 12210-
 201-1130-123-d. 120-129-11-120-121-0. 120-127-11. 120-128-0. 120-129-11)

ACCELERATION 0
 2.00
 1.50
 1.20
 0.80
 0.40
 0.00

10⁰
 2 5 + 5 7 0 9 10⁴
 2 5 + 5 7 0 9 10⁶
 2 5 + 5 7 0 9 10⁸
 2 5 + 5 7 0 9 10¹⁰
 FREQUENCY IN HZ



730A

5 FEB 1983

K. KRY

DAMPING VALUE = 0.020

UPSET CONDITION

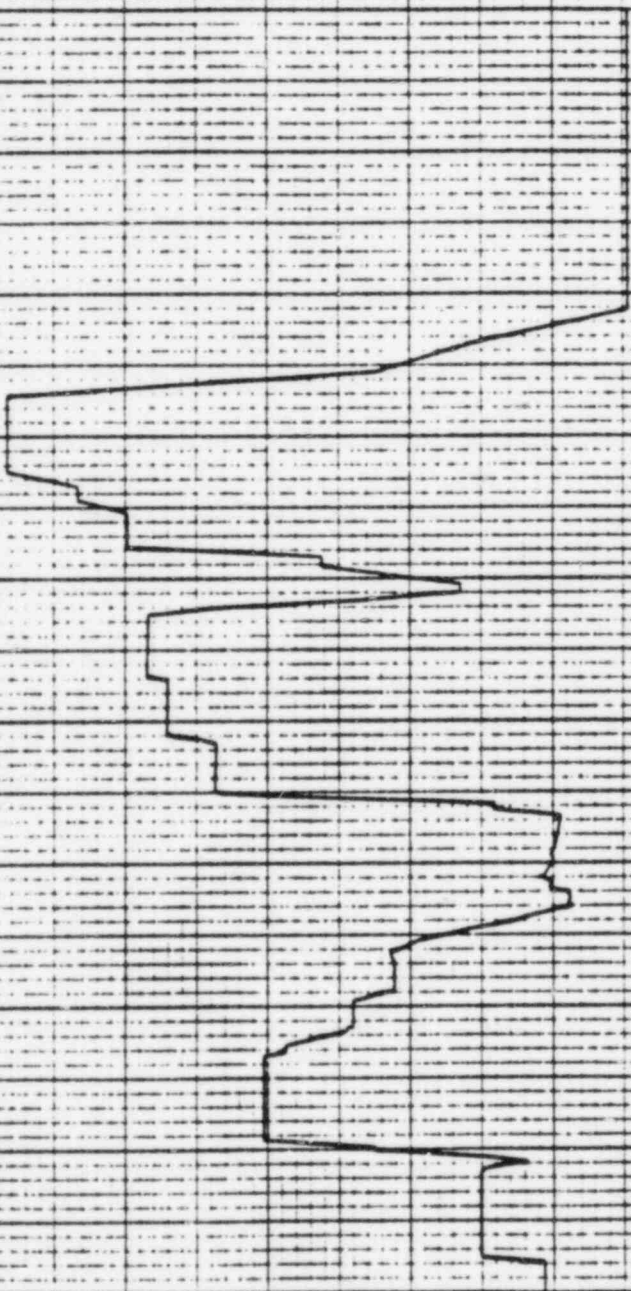
CULF STATES UTILITIES-RBS UNIT 1-CALC12210-WA C1-SQE-1903 REV111
RBS OF ACC-REACTOR BLDG. EL=85.000 MASS=34 SEIS MODEL-COMP.\$HO.8LOG
PEAK SPREAD=20%.25% SEISMIC.15% HYDRODYNAMIC

HOP DIRECTION

DISK CURVE SET NO.33
NOTE: 8855 OF ONE ENVISERV17.2V, 18V, 81VCO1, CMC '8-2210-
201-1130-124-0-120-120-1, 120-111-0)

ACCELERATION G

0.40
0.20
0.00
1.00
1.20
1.40



FREQUENCY IN HZ

0 1 2 3 4 5 6 7 8 9 10

214

9 FEB 1963

K. RAY

DAMPING VALUE = 0.020

UPSET CONDITION

GULF STATES UTILITIES-RBS UNIT 1-CR C12210-NA C1-5DE-1903 REV11)
RBS OF ACC.-REACTOR BLOC., EL-85-000, MASS-38 SEIS MODEL-COMP-SHD.BLOC
PEAK SPREAD -20% ± 25% SEISMIC. 7-15Z HYDRODYNAMIC

VER DIRECTION

NOTE: BASE OF ONE (ENVIRONMENTAL) (M.C. 8-12110-01)
201.1 130.124-0.120-129-1.120-101-01

SPECTRA VER. 0 LEV. 08

DISK CURVE SET NO. 33

ACCELERATION - G

FREQUENCY IN HZ

10⁰

2 3 4 5 6 7 8 9 10

10¹

2 3 4 5 6 7 8 9 10

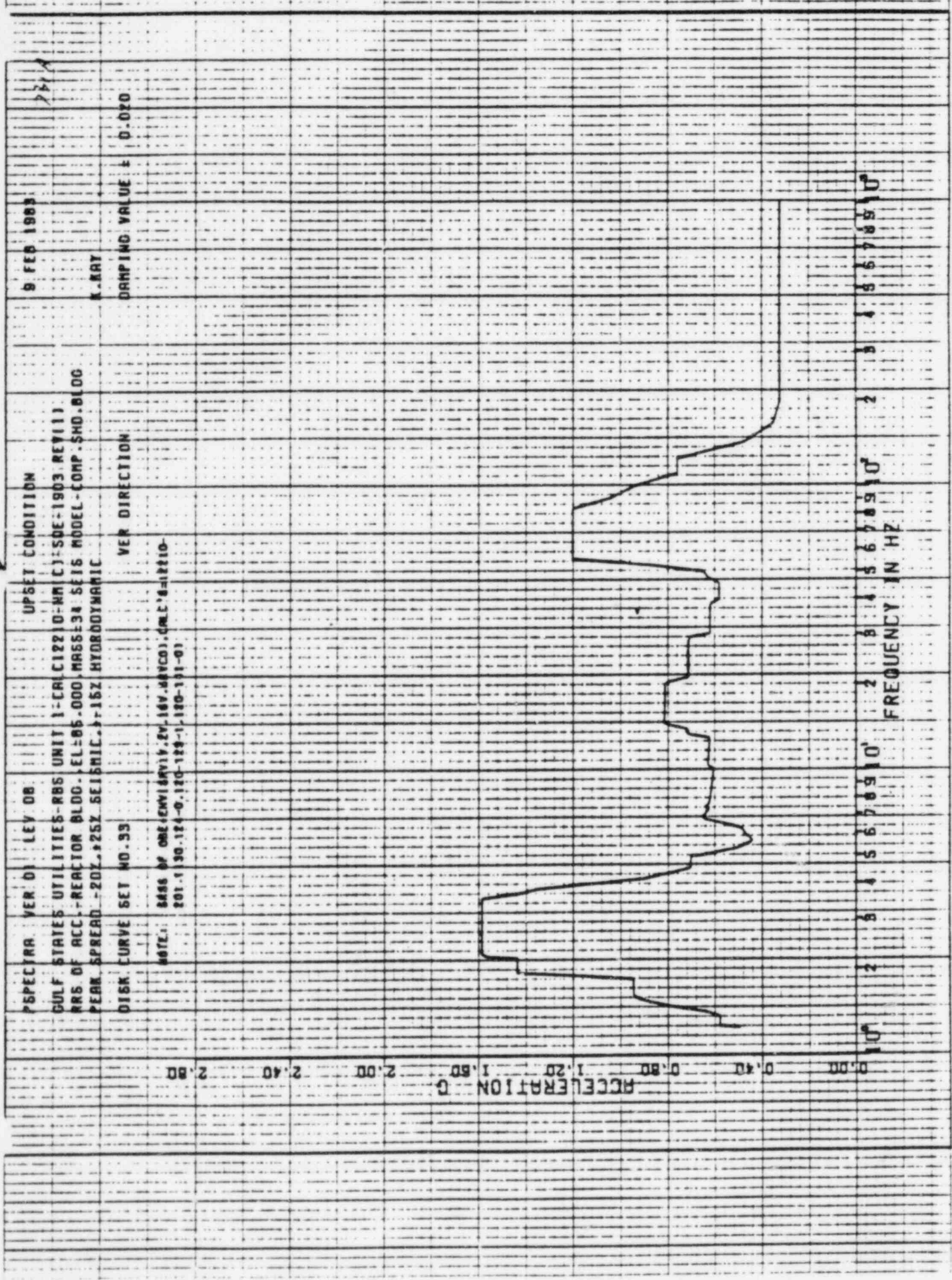
10²

2 3 4 5 6 7 8 9 10

10³

2 3 4 5 6 7 8 9 10

10⁴



934A

8 FEB 1983

K. KAY

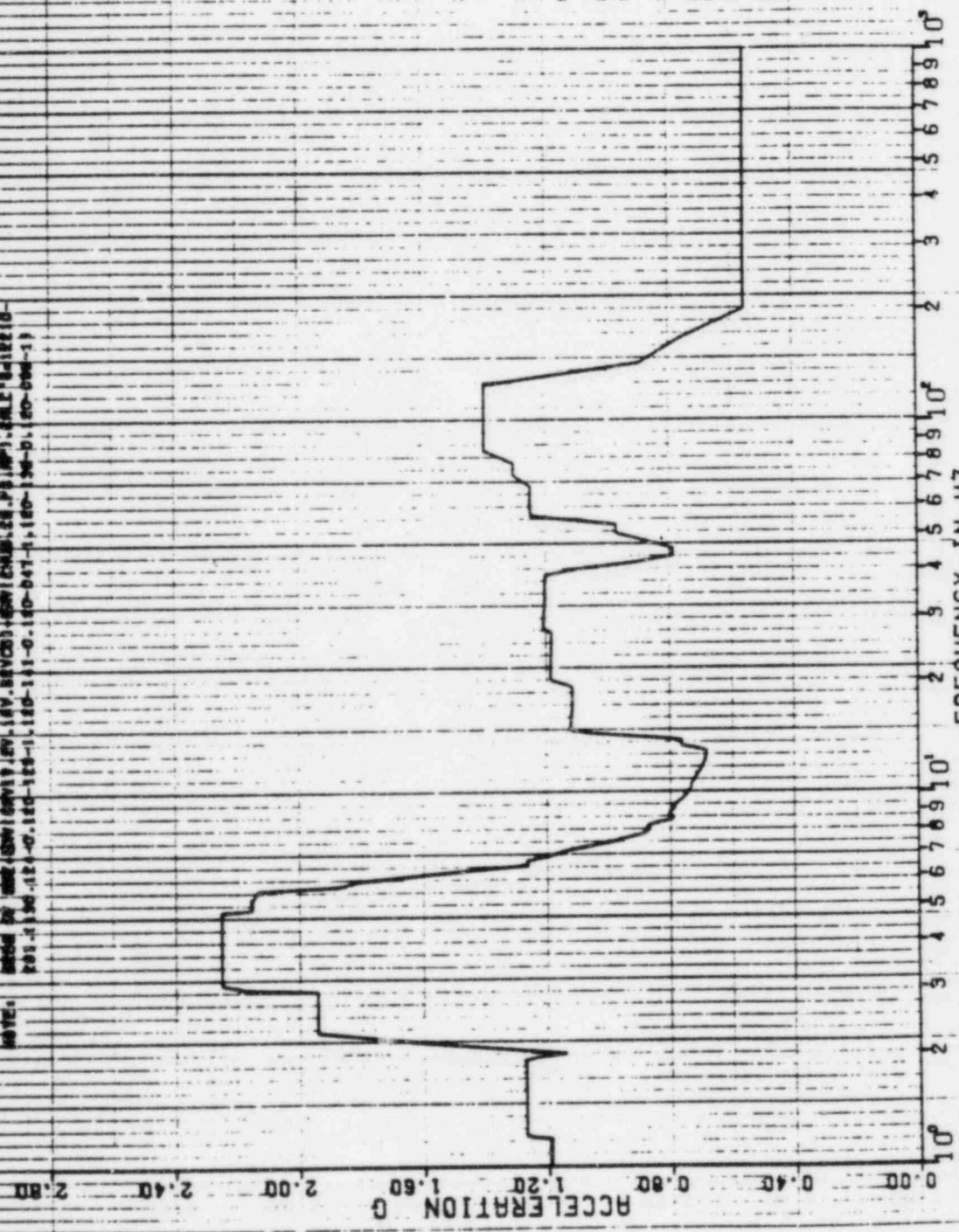
DAMPING VALUE = 0.020

SPECTRA VER 01 LEV 08
 FRUITED CONDITION
 DULF STATES UTILITIES-RBS UNIT 1-CALC 1210-AM (1)-502-1903 REV 11
 RBS OF ACC-REACTOR BLDG., EL=85.000, MASS=34 SETS MODEL-COMP.\$MO.6L00
 PEAK SPREAD =20% 125% SEISMIC. 1.15% HYDRODYNAMIC

HDR DIRECTION

DISK CURVE SET NO. 05

NOTE: MODEL BY M2E (50/10/11) REV. 18V. REVISED PER CHANGES BY M2E. (ALL 8/12/21/0-
 201-130-124-0-120-120-110-111-0-110-047-1-100-130-01-100-000-1)



9357A

0 FEB 1963

K.KRY

DAMPING VALUE = 0.020

FRUITED CONDITION

PSPECTRA VER 01 LEV 08

GULF STATES UTILITIES-R66 UNIT 1-CALCIZZIO-NR(CY-SQE-1903 REV11)

RMS OF ACC.-REACTOR BLDG.-EL-85.000 MASS=34 SET6 MODEL-COMP.SMD.0100

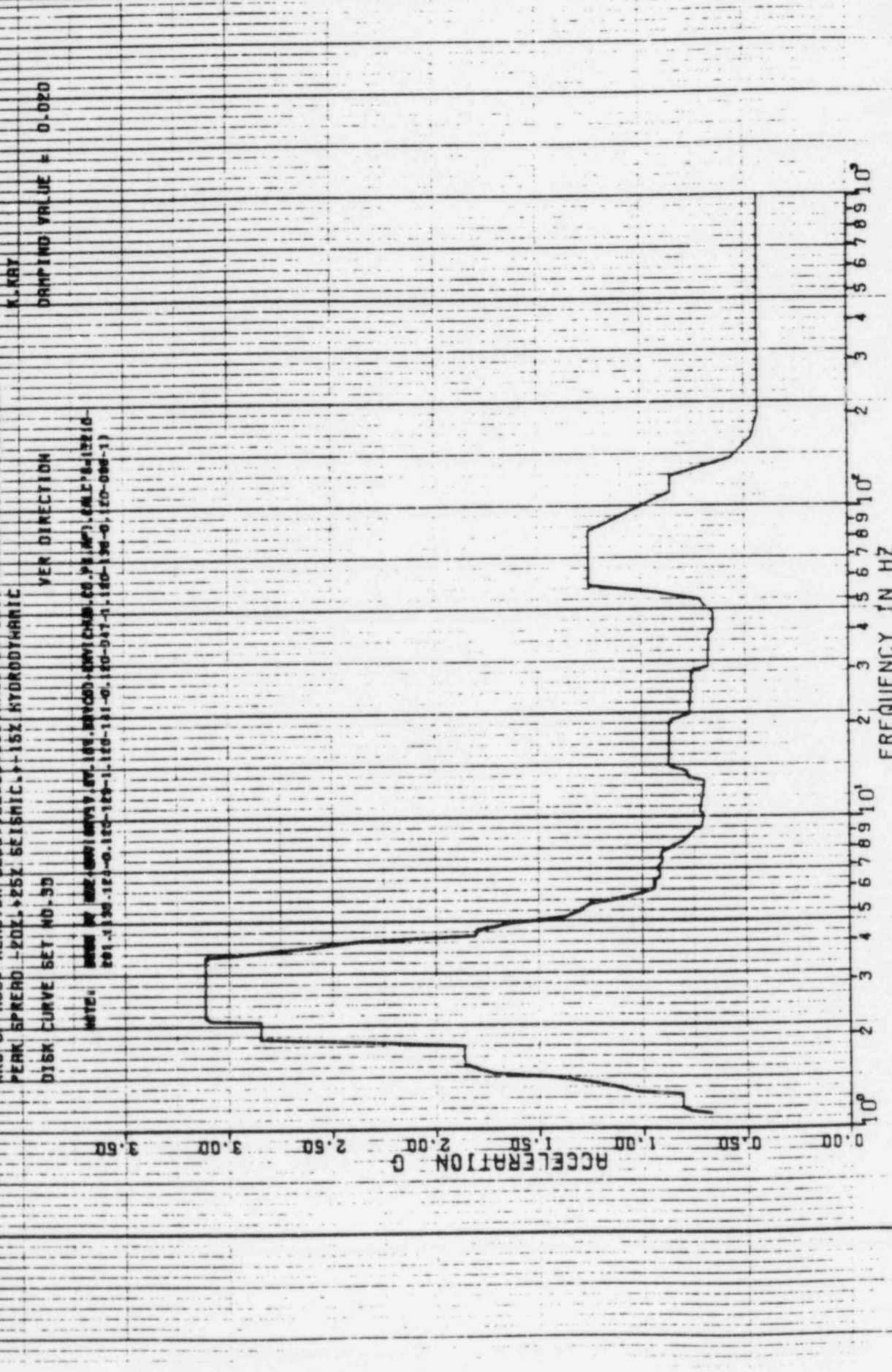
PERK SPREAD -20ZL-25Z SEISMIC.+15Z HYDRODYNAMIC

DISK CURVE SET NO.30

VER DIRECTION

NOTE: MODEL BY 002 (001) 000 V 07.10V.00V00+(00V)000.C0.00.00V).00L1'0-12Z10-

001.130.121-0.100-100-1.100-111-0.100-001-1.100-100-0.100-000-1)

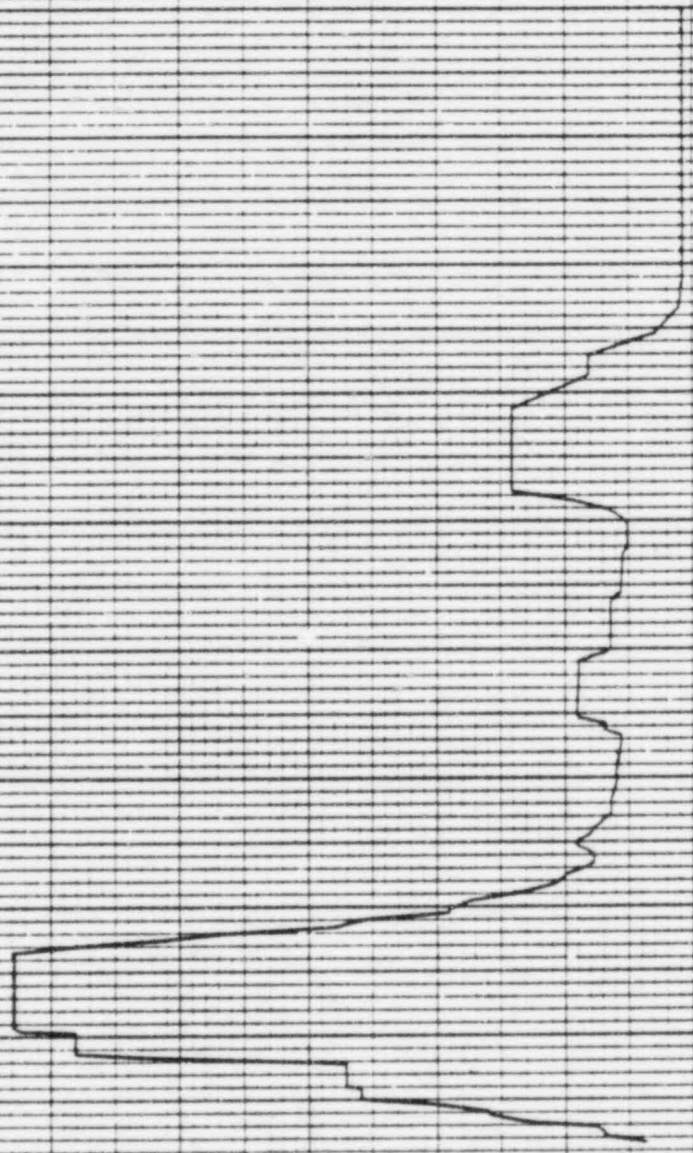


9 FEB 1980
A. KRY
DAMPING VALUE = 0.050

FRUITED CONDITION
SPECTRA VER 01 LEV 08
GULF STATES UTILITIES-RGS UNIT 1-CALC12210-NM(C)-68E-1903 RCY(1)
RGS OF ACC-REACTOR BLDG-1E1E85.000,RRS6:28 SITE MODEL-COMP \$MO.0100
PEAK SPREAD -20.125% SEISMIC.1:15Z HYDRODYNAMIC
DISK CURVE SET NO.55
VEN DIRECTION

NOTE: BASE OF CALC (CONV) CONV. BY SANCOS (MAY 1978) (CALC 1612210-
CONV. BY SANCOS (MAY 1978) (CALC 1612210-160-111-0.140-011-0.160-150-0.160-080-1)

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40



10^0 10^1 10^2
FREQUENCY IN HZ
2 3 4 5 6 7 8 9 10

9 FEB 1963

10.719

PSPECTRA VER 00 LEV 00
 TABLE UTILITIES-ABS UNIT 3-CH. 2220-NMCT-5DE-1809 REV 11
 PPS OF REC.-REACTOR BLDG., EL=85.000, MASS=54, SEIS MODEL-COMP. SHD-BLDD
 PEAK SPHERI -202.425Z SEISMIC-152, HYDRODYNAMIC
 DISK CURVE SET NO. 33
 VER DIRECTION

K.KRY
DAMPING VALUE = 0.040

NOTE: AREA OF 602.60VIB/SEC. 2.00-1.50-1.00-0.50-0.25-0.125-0.0625-0.03125-0.015625-0.0078125-0.00390625-0.001953125-0.0009765625-0.00048828125-0.000244140625-0.0001220703125-0.00006103515625-0.000030517578125-0.0000152587890625-0.00000762939453125-0.000003814697265625-0.0000019073486328125-0.00000095367431640625-0.000000476837158203125-0.0000002384185791015625-0.00000011920928955078125-0.000000059604644775390625-0.0000000298023223876953125-0.00000001490116119384765625-0.000000007450580596923828125-0.0000000037252902984619140625-0.00000000186264514923095703125-0.00000000093132257461547890625-0.0000000004656612873079453125-0.00000000023283064365397265625-0.000000000116415321826986328125-0.0000000000582076609134931640625-0.00000000002910383045674697265625-0.000000000014551915228373486328125-0.00000000000727595761418697265625-0.000000000003637978807093486328125-0.00000000000181898940354697265625-0.000000000000909494701773486328125-0.00000000000045474735088697265625-0.000000000000227373675443486328125-0.000000000000113686837721719384765625-0.000000000000056843418860897265625-0.0000000000000284217094304493828125-0.000000000000014210854715224697265625-0.00000000000000710542735761418697265625-0.000000000000003552713678807093486328125-0.00000000000000177635683940354697265625-0.000000000000000888178419701773486328125-0.000000000000000444089209850897265625-0.0000000000000002220446049254493828125-0.000000000000000111022302462724697265625-0.0000000000000000555111512313623486328125-0.00000000000000002775557561561719384765625-0.00000000000000001387778780780897265625-0.000000000000000006938893903904493828125-0.00000000000000000346944695195224697265625-0.0000000000000000017347234759761418697265625-0.00000000000000000086736173798807093486328125-0.0000000000000000004336808689940354697265625-0.00000000000000000021684043449701773486328125-0.00000000000000000010842021724850897265625-0.000000000000000000054210108624254493828125-0.00000000000000000002710505431212724697265625-0.000000000000000000013552527156061418697265625-0.000000000000000000006776263578030897265625-0.0000000000000000000033881317890154493828125-0.000000000000000000001694065894507724697265625-0.0000000000000000000008470329472503904493828125-0.000000000000000000000423516473625195224697265625-0.000000000000000000000211758236812561418697265625-0.00000000000000000000010587911840630897265625-0.000000000000000000000052939559203154493828125-0.0000000000000000000000264697796015724697265625-0.00000000000000000000001323488980078861418697265625-0.00000000000000000000000661744490039430897265625-0.000000000000000000000003308722450197154493828125-0.0000000000000000000000016543612250985724697265625-0.000000000000000000000000827180612548893904493828125-0.0000000000000000000000004135903062744493828125-0.000000000000000000000000206795153137224697265625-0.00000000000000000000000010339757656861418697265625-0.00000000000000000000000005169878828430897265625-0.000000000000000000000000025849394142154493828125-0.00000000000000000000000001292469707107724697265625-0.0000000000000000000000000064623485353904493828125-0.00000000000000000000000000323117426769724697265625-0.00000000000000000000000000161558713389861418697265625-0.0000000000000000000000000008077935694493828125-0.000000000000000000000000000403896784724697265625-0.0000000000000000000000000002019483923623486328125-0.0000000000000000000000000001009741961811719384765625-0.0000000000000000000000000000504870980905897265625-0.00000000000000000000000000002524354904529493828125-0.00000000000000000000000000001262177452264724697265625-0.000000000000000000000000000006310887261323486328125-0.000000000000000000000000000003155443630661719384765625-0.000000000000000000000000000001577721815330897265625-0.0000000000000000000000000000007888609076654493828125-0.000000000000000000000000000000394430453832724697265625-0.0000000000000000000000000000001972152269163904493828125-0.0000000000000000000000000000000986076134581719384765625-0.0000000000000000000000000000000493038067290897265625-0.00000000000000000000000000000002465190336454493828125-0.0000000000000000000000000000000123259516822724697265625-0.00000000000000000000000000000000616297584113623486328125-0.000000000000000000000000000000003081487920561418697265625-0.000000000000000000000000000000001540743960280897265625-0.0000000000000000000000000000000007703719801404493828125-0.000000000000000000000000000000000385185990070224697265625-0.00000000000000000000000000000000019259299503511719384765625-0.000000000000000000000000000000000096296497517561418697265625-0.000000000000000000000000000000000048148248758780897265625-0.0000000000000000000000000000000000240741243793904493828125-0.00000000000000000000000000000000001203706218969724697265625-0.00000000000000000000000000000000000601853109483904493828125-0.0000000000000000000000000000000000030092655474195224697265625-0.000000000000000000000000000000000001504632773709761418697265625-0.00000000000000000000000000000000000075231638685493828125-0.0000000000000000000000000000000000003761581934274697265625-0.000000000000000000000000000000000000188079096713724697265625-0.000000000000000000000000000000000000094039548356861418697265625-0.000000000000000000000000000000000000047019774178430897265625-0.0000000000000000000000000000000000000235098870892154493828125-0.000000000000000000000000000000000000011754943544611719384765625-0.00000000000000000000000000000000000000587747177230897265625-0.000000000000000000000000000000000000002938735886154493828125-0.0000000000000000000000000000000000000014693679430724697265625-0.00000000000000000000000000000000000000073468397153623486328125-0.00000000000000000000000000000000000000036734198576811719384765625-0.0000000000000000000000000000000000000001836709928840897265625-0.009183549644204493828125-0.00459177482210224697265625-0.0022958874110511719384765625-0.00114794370552561418697265625-0.0005739718527630897265625-0.00028698592638154493828125-0.000143492963190724697265625-0.00717464815953623486328125-0.00358732407976811719384765625-0.0017936620398840897265625-0.00089683101994204493828125-0.0004484155099710224697265625-0.000224207754985511719384765625-0.0001121038774927630897265625-0.005605193874638154493828125-0.0028025969373190724697265625-0.00140129846865953623486328125-0.00070064923432976811719384765625-0.0003503246171648840897265625-0.00017516230858244204493828125-0.0087581154291210224697265625-0.004379057714560511719384765625-0.0021895288572802561418697265625-0.001094764428640127630897265625-0.0005473822143200638154493828125-0.00027369110716003190724697265625-0.0001368455535800154493828125-0.0068422776790007724697265625-0.003421138839500038623486328125-0.0017105694197500019311719384765625-0.000855284709875000096561418697265625-0.0004276423549375000048280897265625-0.000213821177468750000241404493828125-0.000106910588734375000012070224697265625-0.0053455294367187500000603511719384765625-0.002672764718359375000003017561418697265625-0.00133638235916796875000001508780897265625-0.0006681911795839843750000007543904493828125-0.0003340955897919921875000000377195224697265625-0.0001670477948959960937500000018859761418697265625-0.008352389744799804687500000009429880897265625-0.00417619487239990234375000000047149404493828125-0.00208809743619995117187500000002357470224697265625-0.00104404871809997558750000000117873511719384765625-0.0005220243594099877793750000000589367561418697265625-0.0002610121797049938893750000000294683780897265625-0.00013050608985249969468750000001473418904493828125-0.006525304492624993473437500000073670945224697265625-0.003262652246312499173671875000003683547261418697265625-0.00163132612315624990868393750000018417736307093486328125-0.0008156630615781249904341968750000009208868153904493828125-0.000407831530789062499021708437500000460443407695224697265625-0.00020391576539453124990108541968750000023022170384765625-0.000101957882697265624990054270843750000011511085193828125-0.00509789413486328124990027135419687500000575554259697265625-0.0025489470674316419900135677343750000028777712984765625-0.000127447353371582099000678386875000014388856493828125-0.00637236766857910499000339193437500000719442824697265625-0.00318618383428955249900016959671687500000359721412316418697265625-0.00159309191714477624990000847983584375000001798607061719384765625-0.000796545958572386249900004239917921875000000899303530897265625-0.000398272979286193124990000211995896093750000004496517654493828125-0.001991364896430965624990000105997948046875000000224825882724697265625-0.0099568244821548281249900000529989740234375000000112412941367193828125-0.00497841224107414199000002649948701171875000000562064706897265625-0.0024892061205370709900000132497435058750000002810323534493828125-0.000124460306026853549900000066248717529375000000140516176724697265625-0.006223015301342727499000000331243587646875000000070258088367193828125-0.

6479

9 FEB 1963

K. RAY

DAMPING VALUE = 0.010

SPECTRA VER 01 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CALC(12210-NM(C)-SDE-1903-REV11)
 RRS OF ACC.-REACTOR BLDG., EL=14.00, MASS=11 SEIS MODEL-STEEL CONT
 PEAK SPREAD - 20% +25% SEISMIC, -15% HYDRODYNAMIC
 DISR. CURVE SET NO. 10
 HOR. DIRECTION
 NOTE: MASS OF OBSERVATION PT. 14V. BYVCO, CALC. 412210-
 TOT. 130.124-G, 120-129-1, 120-131-03

HOR. DIRECTION

ACCELERATION G

2.50

2.10

1.70

1.30

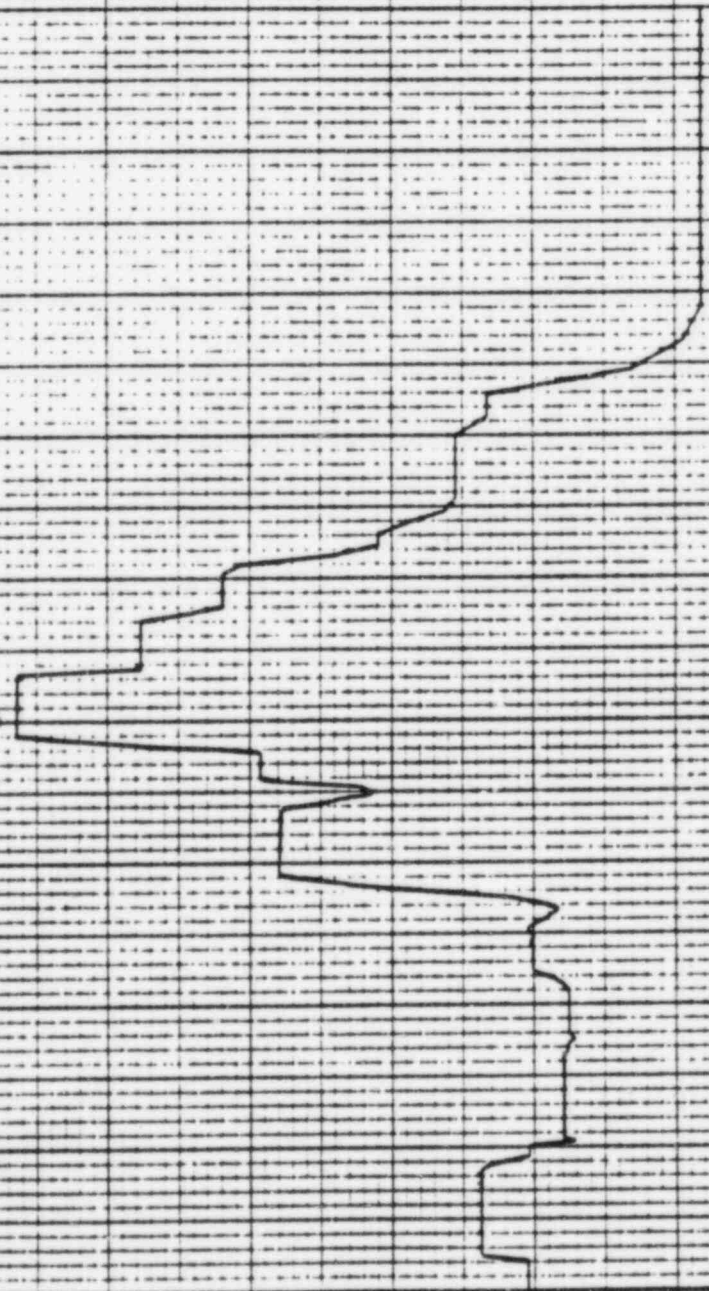
0.90

0.50

0.10

10
 2
 3
 4
 5
 6
 7
 8
 9
 10
 10⁰
 10¹
 10²
 10³
 10⁴
 10⁵
 10⁶
 10⁷
 10⁸
 10⁹
 10¹⁰

FREQUENCY IN HZ



352A

8 FEB 1963

FALTED CONDITION

PSPECTRA VER 01 LEV 08

GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM1C1-SQE-1903 REV(1)
RRS OF ACC--REACTOR BLDG., EL=114.00, MASS=11 SEIS MODEL--STEEL CONT
PEAK SPREAD =20% *25% SEISMIC. P-152 HYDRODYNAMIC

DISK CURVE SET NO. 10 HDR DIRECTION

WATER, SEIS OF SSE-COM/SEVIV, EV.18V, SEVCO1-SEVICHAD.CO.78.MP3.CALC.6412210
P01.130.121-0.120-120-1.120-111-0.120-067-1.120-120-0.120-090-11.

K.KAY

DAMPING VALUE = 0.020

ACCELERATION G

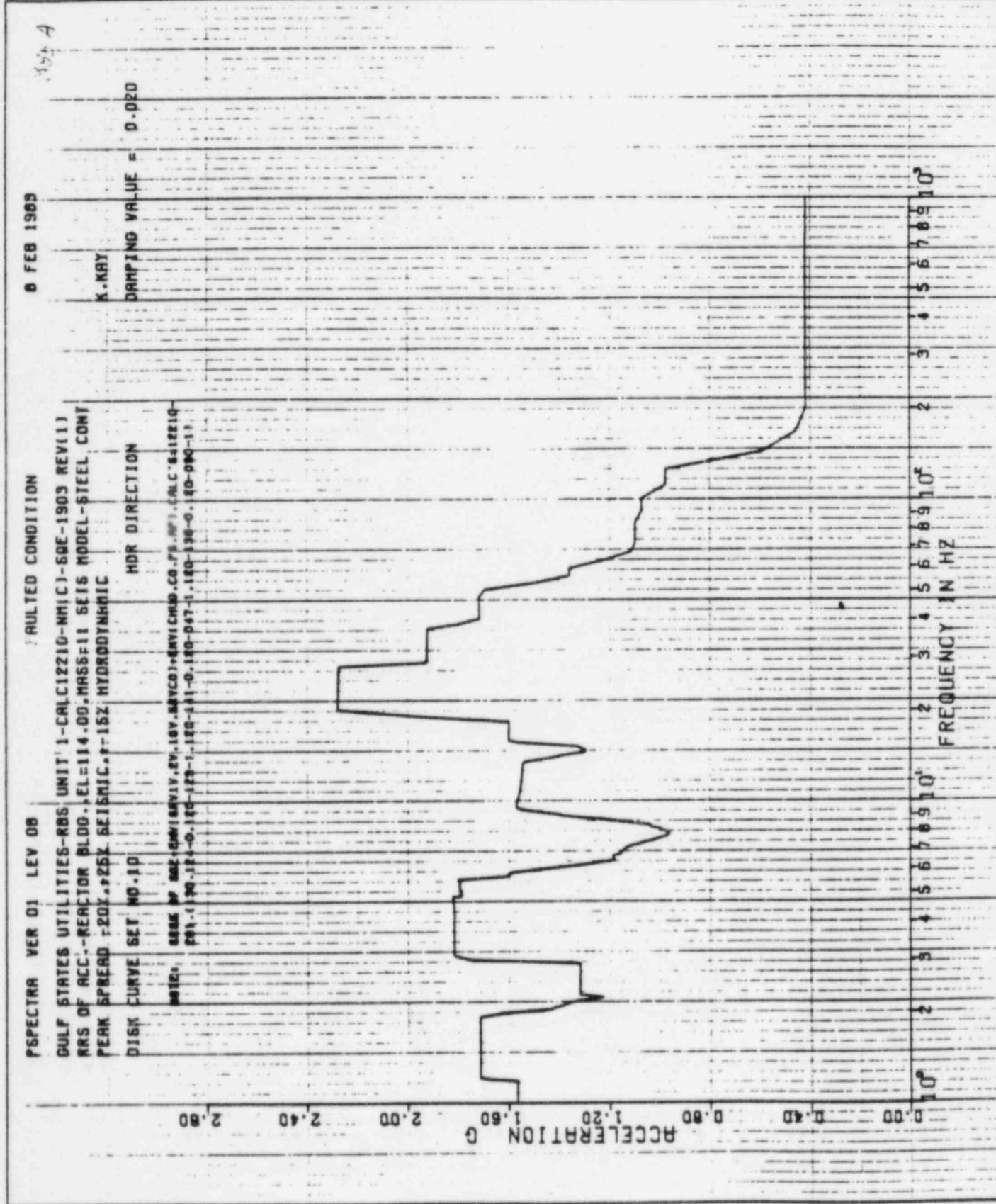
10⁰

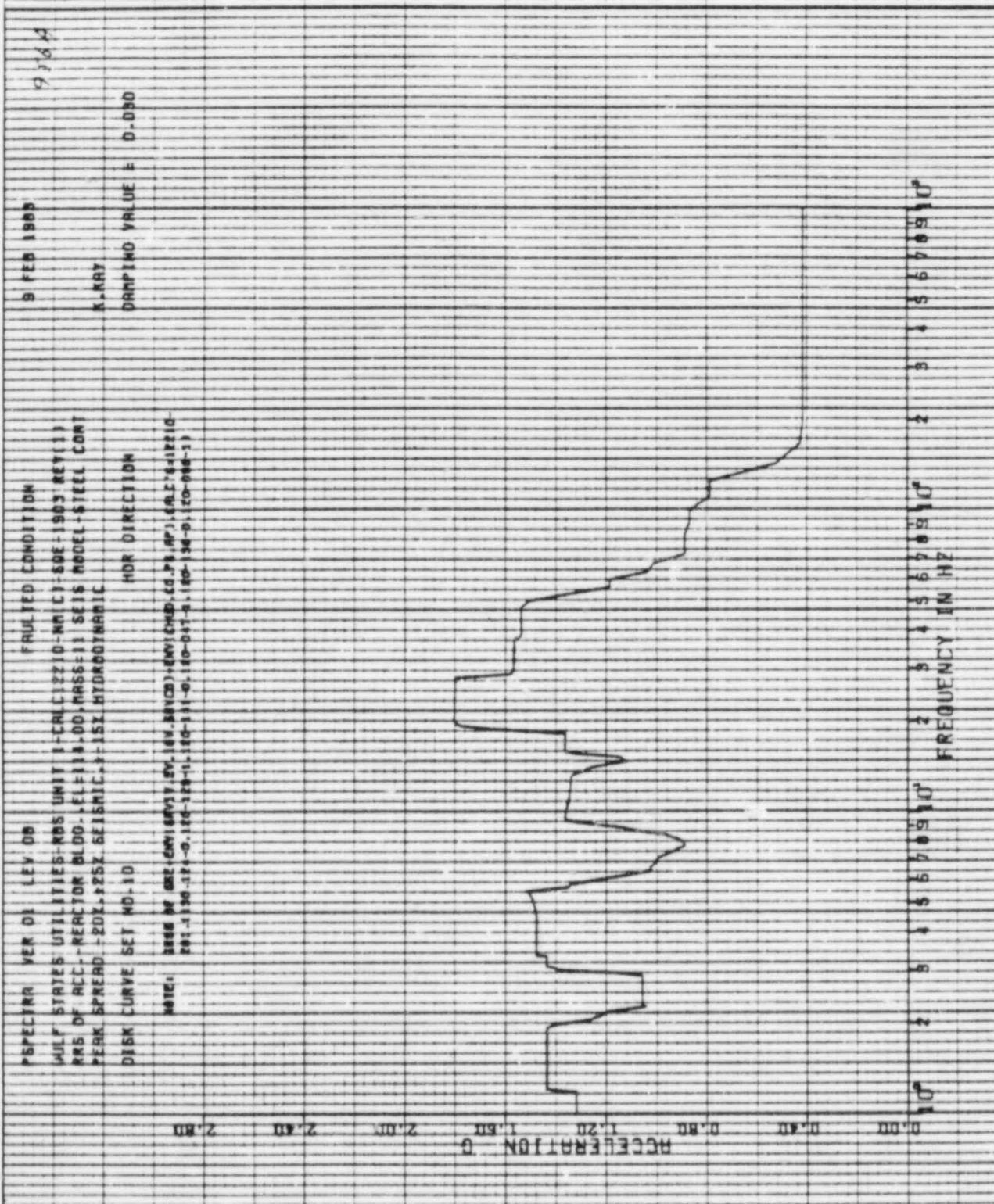
2 3 4 5 6 7 8 9 10¹

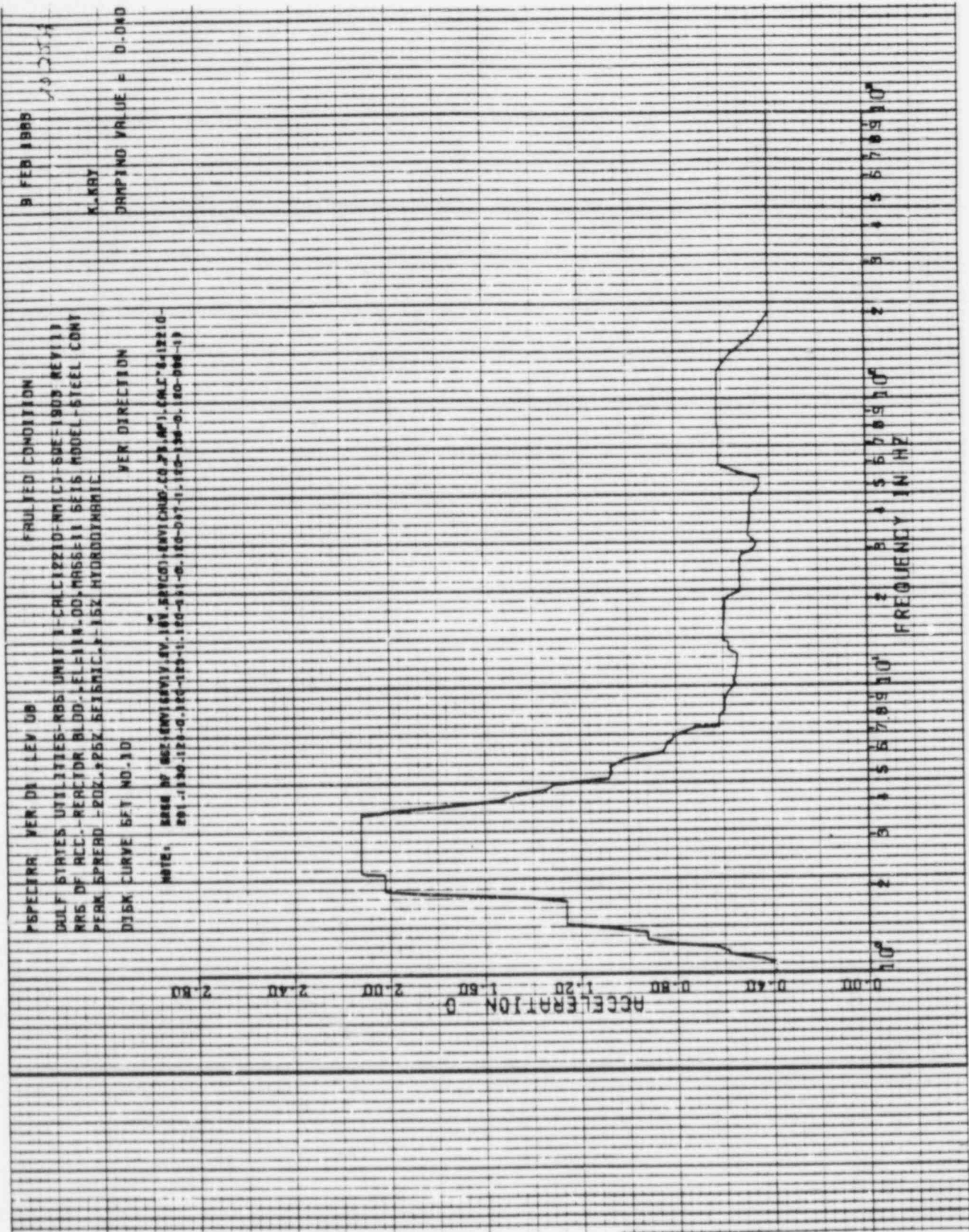
2 3 4 5 6 7 8 9 10²

2 3 4 5 6 7 8 9 10³

FREQUENCY IN HZ







621A

9 FEB 1963

K. RAY

DAMPING VALUE = 0.1

UPSET CONDITION

UNIT 1-CALC 12210-NM(C)-50E-1903 REV 11)

MRS OF ACC.-REACTOR BLDG.-EL=193.00, MASS=12 SEIS MODEL-STEEL CONT

PERK. SPREAD.-20% ± 25% SEISMIC.-15% HYDRODYNAMIC

DISK CURVE SET NO. 11

NOTE: MASS OF ONE ENVI8M VIB. 2V. 18V. SRCOS. CALC. 8-12210-001-130-124-0-120-120-1-120-131-0)

MDR DIRECTION

VER 01 LEV 08

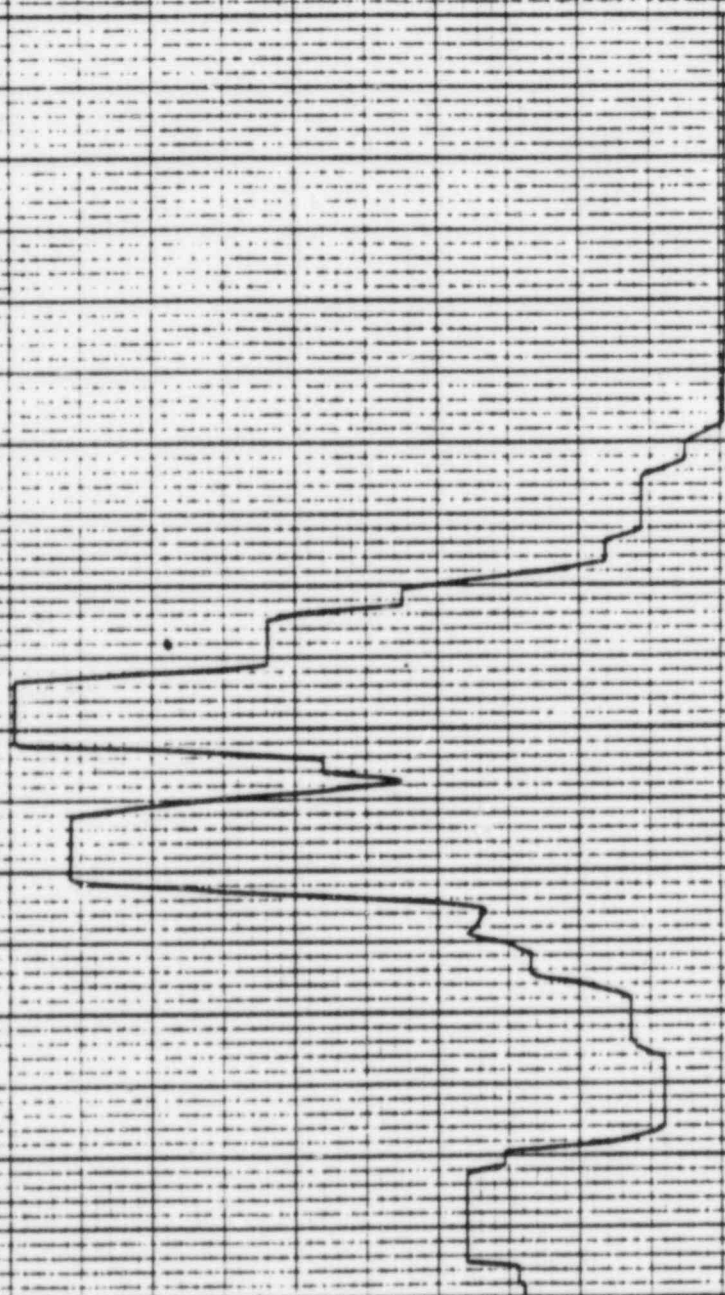
PSPECTRA

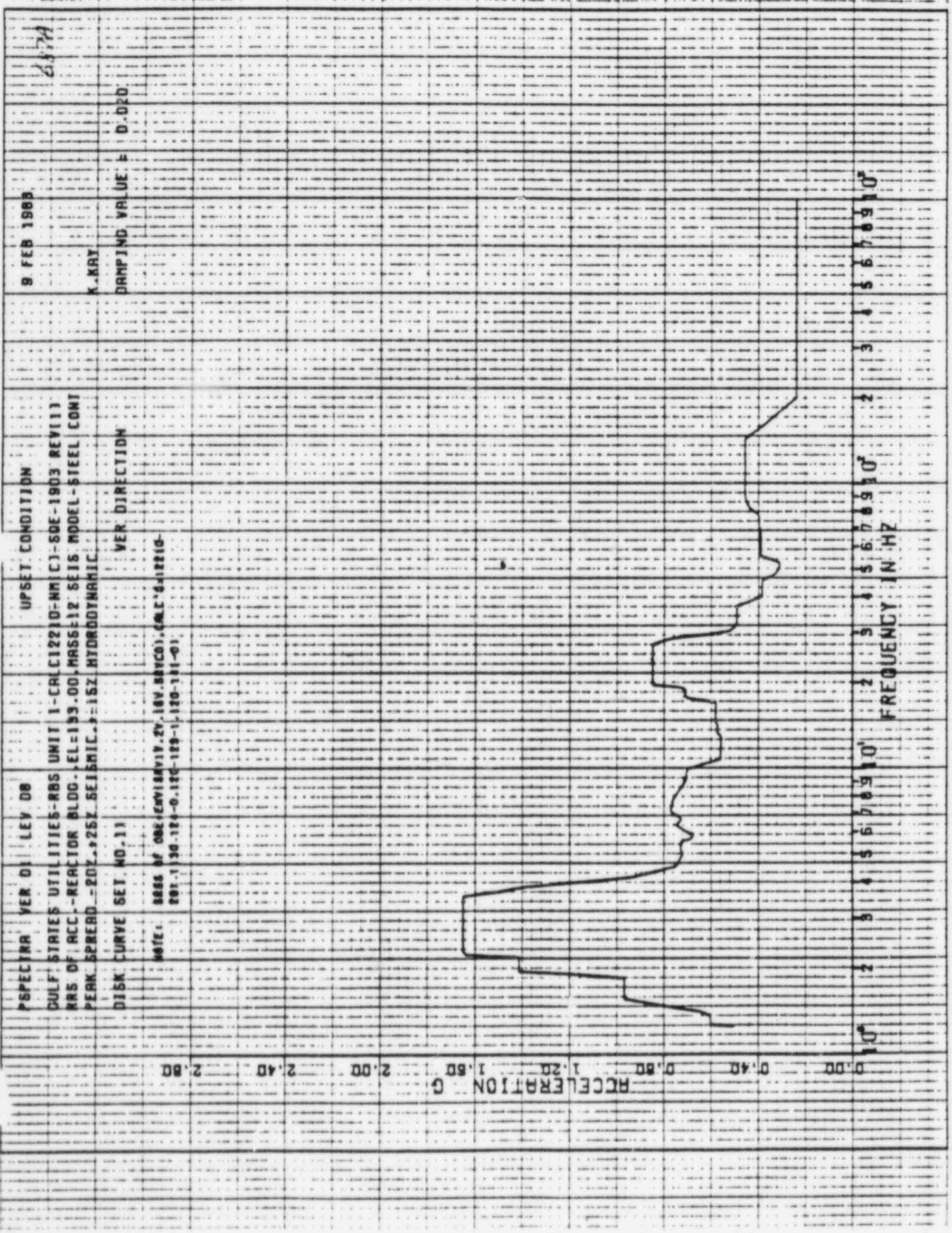
ACCELERATION G

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





9 FEB 1983
 K. KRY
 DAMPING VALUE = 0.020

UPSET CONDITION
 VER DIRECTION

PSPECINA VER 01 LEV 08
 DULF STATES UTILITIES--RBS UNIT 1--CALC 12210-NM C1--SDE-1903 REV 11
 RMS OF ACC.--REACTOR BLDG., EL=193.00, MASS=12 SEIS MODEL--STEEL CONT
 PEAK SPREAD --20%+25% SEISMIC. --15Z HYDRODYNAMIC

DISK CURVE SET NO. 11
 NOTE: MASS OF ONE (C/W/18A/17.2V, 18V, 807C6), (MLT 4-12210-
 201-1 30-124-0-120-109-1-120-141-01)

10^0 10^1 10^2
 2 3 4 5 6 7 8 9 10
 FREQUENCY IN HZ

ACCELERATION G

8 FEB 1983

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

GULF STATES UTILITIES-RBS UNIT 1-CALC12210-MN(C1)-6DE-1903 REV(1)
RRS OF ACC--REACTOR BLDG--EL-133.00.MASS=12 SE16 MODEL-STEEL CONT
PEAK SPREAD -20%+25% SEISMIC,+15% HYDRODYNAMIC

DISK CURVE SET NO.11

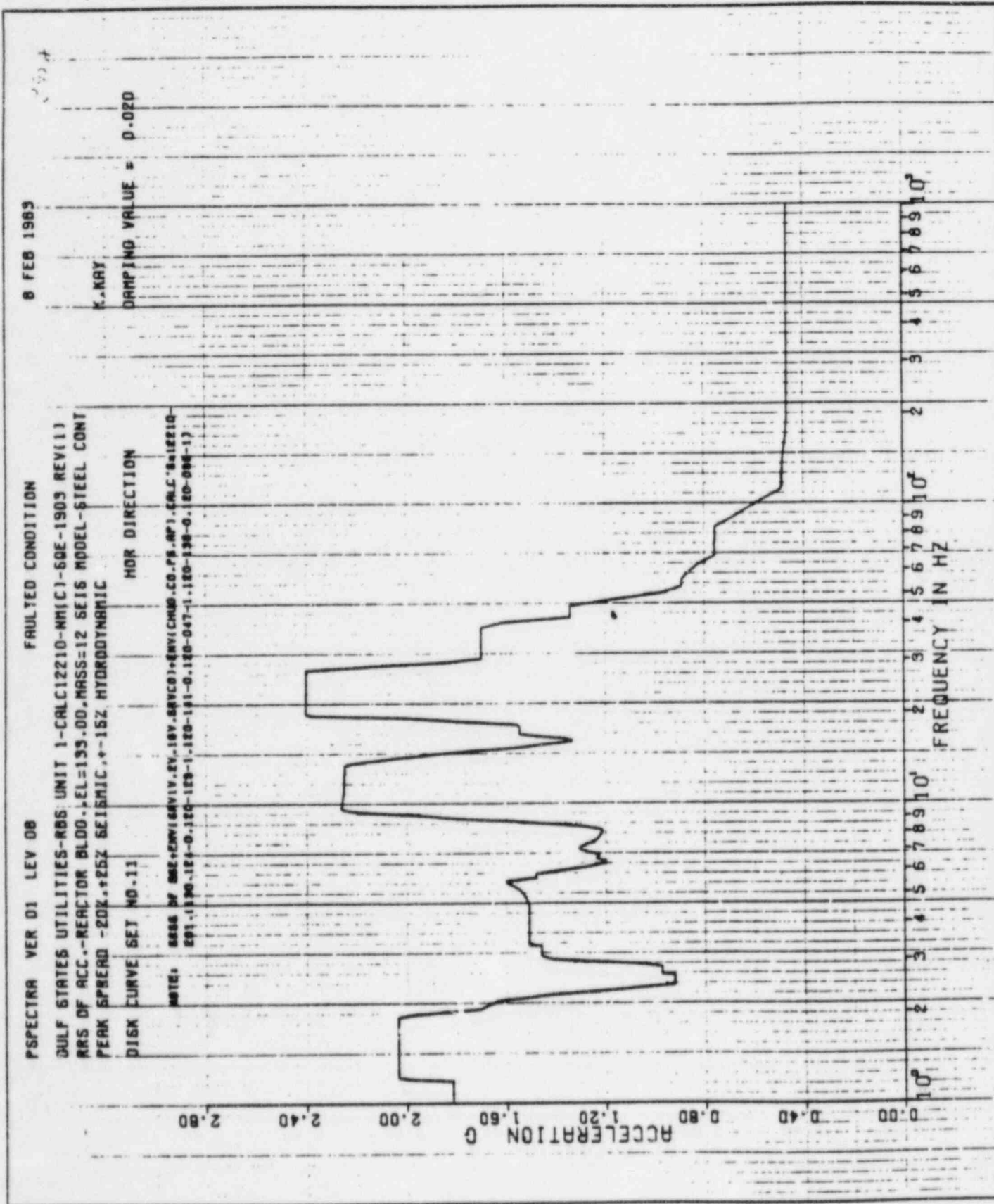
HOR DIRECTION

NOTE: MASS OF ONE+ENVI+ENVIV.2V.18V.SRVCB)+ENVICMB.CO.-PS.NP).CALC.9.12210
291.1330.129-0.120-129-1.120-191-0.120-0.47-1.120-198-0.120-096-1)

K.KRAY
DAMPING VALUE = 0.020

ACCELERATION G

FREQUENCY IN HZ



671A

6 FEB 1985

FAULTED CONDITION

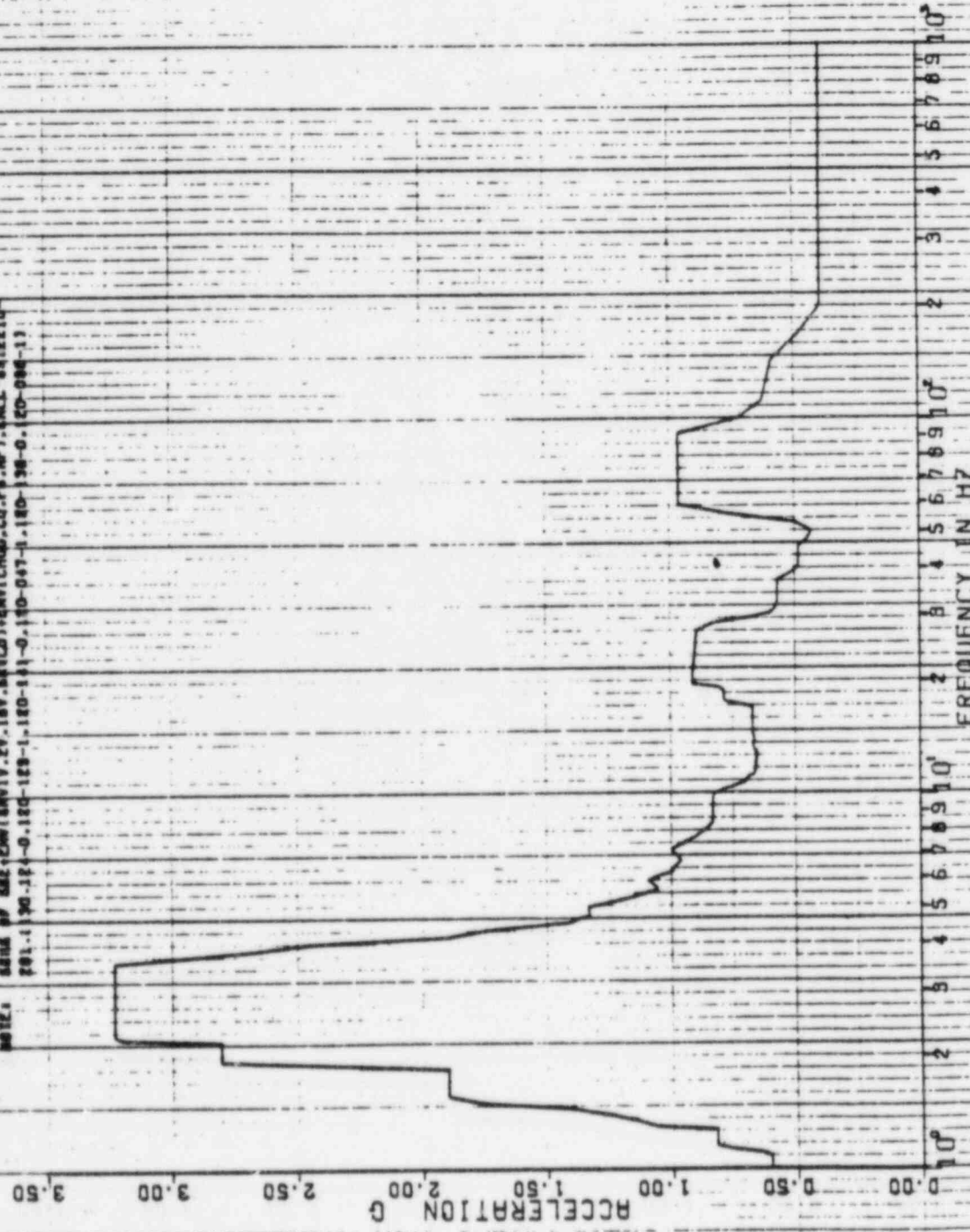
PSPECTRA VER 01 LEV 08

GULF STATES UTILITIES-RBS UNIT 1-CALC12210-MM(C)-SOF-1903 REV(1)
RRS OF ACC.-REACTOR BLDG., EL-193.00, MASS=12 SETS MODEL-STEEL CONT
PEAK SPREAD -20% ±25% SEISMIC, P-15% HYDRODYNAMIC

DISK CURVE SET NO. 11 VER DIRECTION

NOTE: MASS BY SET: COM180V1V, 2V, 18V, 58V(C3)+ENVICMB, CO, PS, NP, CALC-612210
291, 1190, 121, 0, 120-129-1, 120-111, 0, 120-017-1, 120-136-0, 120-096-1

K=KBY
DAMPING VALUE = 0.020



FREQUENCY IN HZ

July 4

9 FEB 1965

FAULTED CONDITION

PERFECTA VER DI LEY DB
DULF STATES UTILITIES-RDS UNIT 1-CR1C12210-MM C1-502-1903 REV111
MRS DF REC-REACTOR BLDG-1EL-139-00, MASS-17, SE16 MOCEL-STEEL CONT
PEAK SPREAD -201.425X SEISMIC-1.151 HYDRODYNAMIC

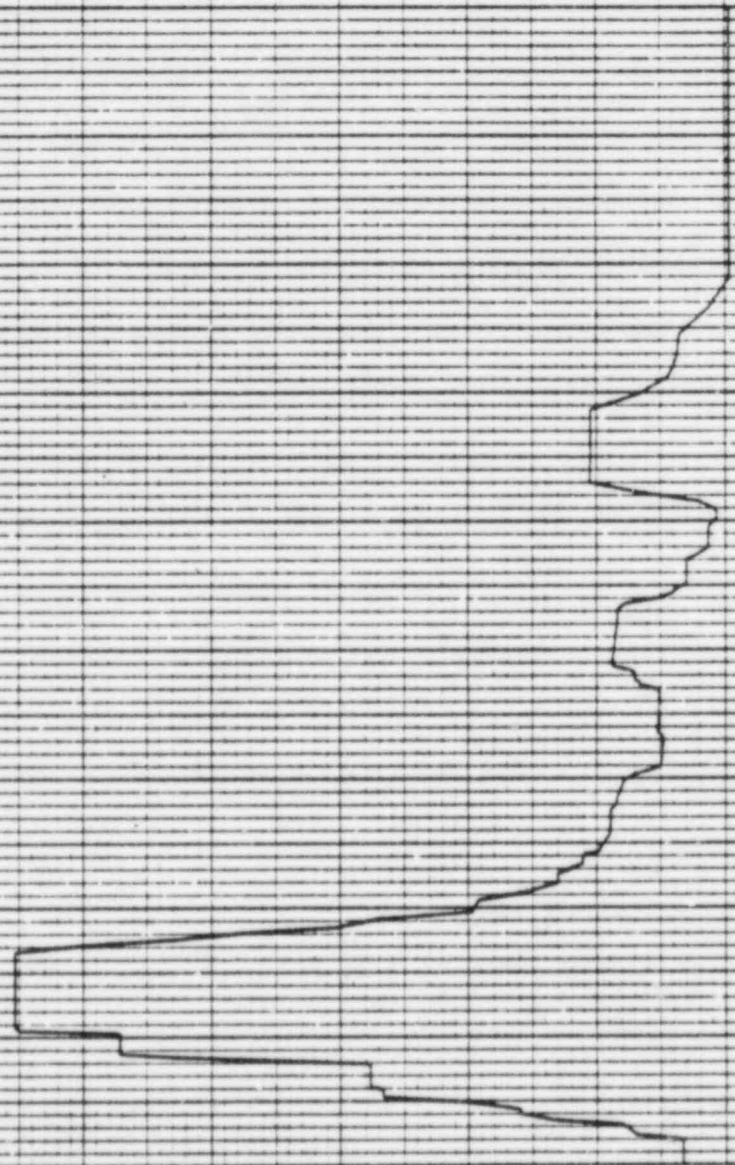
K. KAY

DAMPING VALUE = 0.030

VER DIRECTION

DISK CURVE SEY NO. 11
NOTE: MASS BY 00210M18RV17, CV, 18X, 28VCO3+(M)CHRD, CD, P, AP, (MLT)*E-11E10-
201.4130-121-0.120-328-11.120-311-0.120-317-1.120-320-0.120-318-3

RECELERATION 0 0.50 1.00 1.50 2.00 2.50



10⁰ 2 5 4 5 7 0 9 10¹ 2 5 4 5 7 0 9 10² 2 5 4 5 7 0 9 10²
FREQUENCY IN HZ

9 FEB 1988

1374

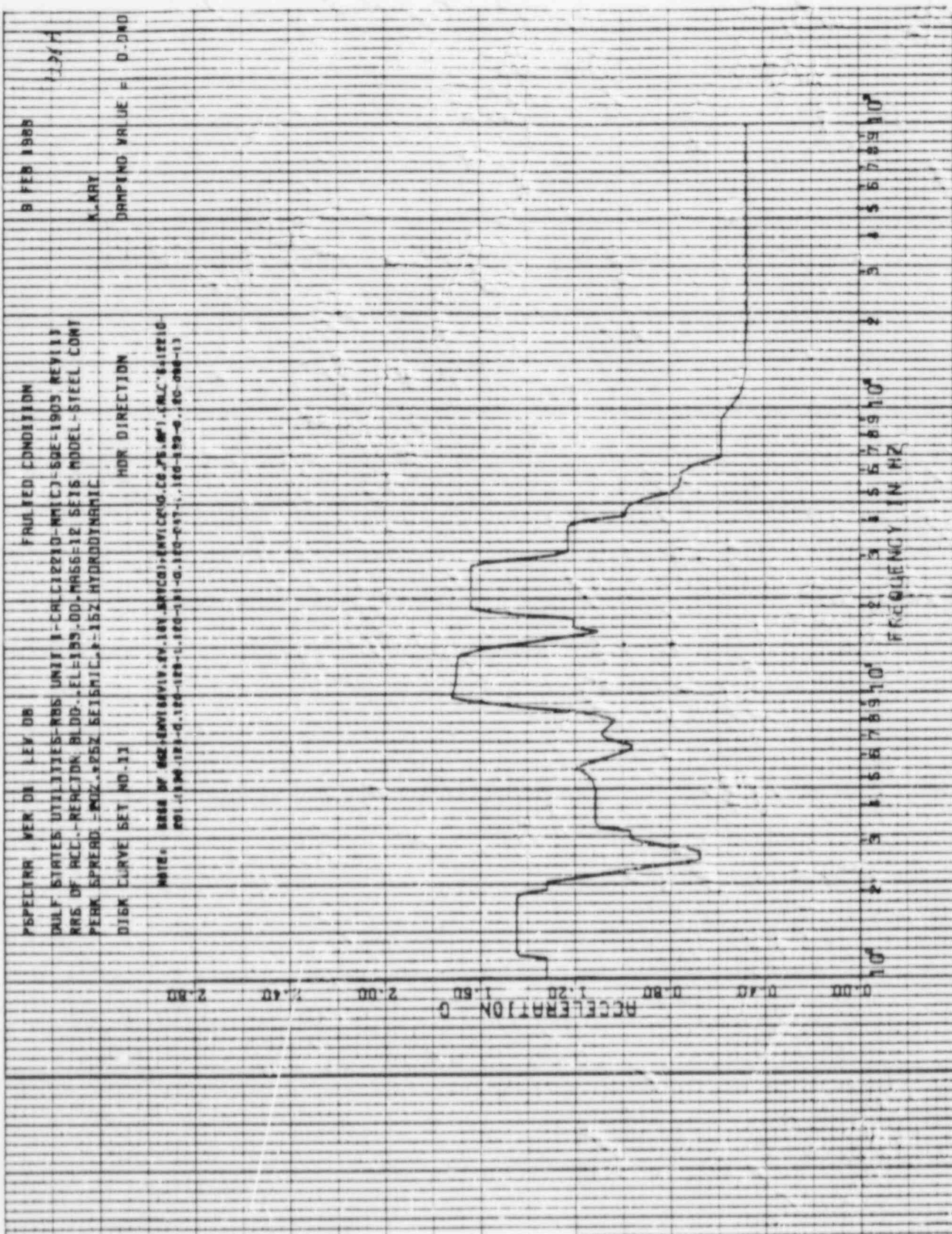
PSPECTRA VER DN LEV DB
 DULF STATES UTILITIES-R85 UNIT 1-CALC12210-MMCJ-SDE-1905 REV111
 ANG OF ACC-REACTDN BLDD-EL=199.00-MASS=12 SETS MODEL-STEEL COM1
 PERK SPREAD-ROK-75Z SEISMIC-1-15Z HYDRODYNAMIC
 D16K CURVE SET NO.11

FRUITED CONDITION

MDR DIRECTION

DAMPING VALUE = 0.000

NOTE: AREA BY 662-SMVI6V1V.DV.18V.ARVIC01-ENVIC0G.CC.ZS.MF1.CALC.0412210-
 001.1196-124-0.180-129-C.180-191-0.180-217-.180-239-0.180-268-13



11314

8 FEB 1965

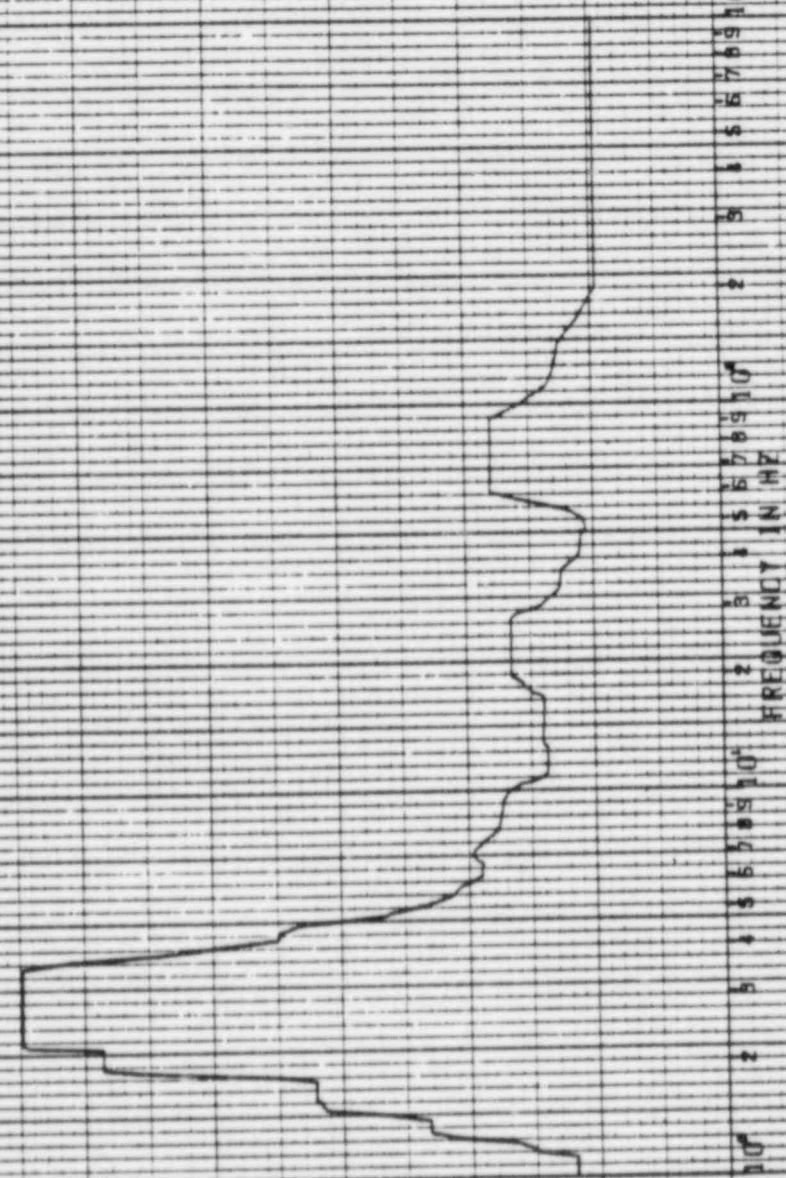
K. ARY

DAMPING VALUE = 0.04

PSPECTRA PER DB LEV DB
 FRUITED CONDITION
 DUFF STATES UTI. 1115-RDS UNIT 1-CALC 12210-NP1 C3-SDE-1909 REV 1.7
 PMS OF REC.-REACTOR BLDG.-EL-199-00.MASS-12 SEIS MODEL-STEEL CONT
 PERM SPREAD -20L. 25% SEISMIC. 1-15Z HYDRODYNAMIC
 DISK CURVE SET NO. 11
 VER DIRECTION

NOTE: BASE OF 100Z (CONV) 1V. 14V. 87100. 10V1000. CG 28 NP1. CAL C-1212210-
 291 -1130. 121-0. 160-128-1. 160-111-0. 160-147-11. 160-138-0. 160-166-13

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80



10⁰ 2 3 4 5 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

EP-9

9 FEB 1985

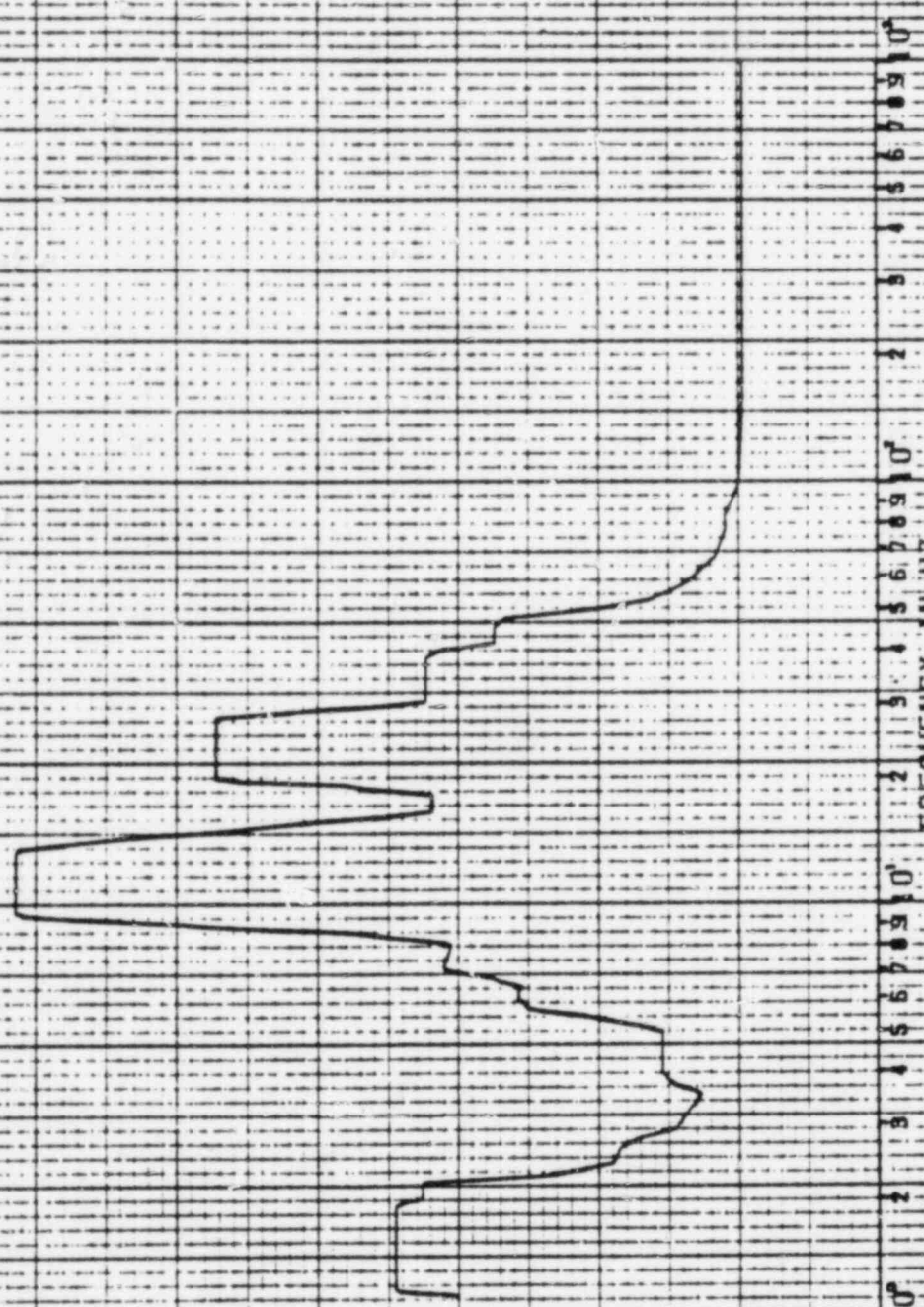
K.M.P.

DAMPING VALUE = 0.020

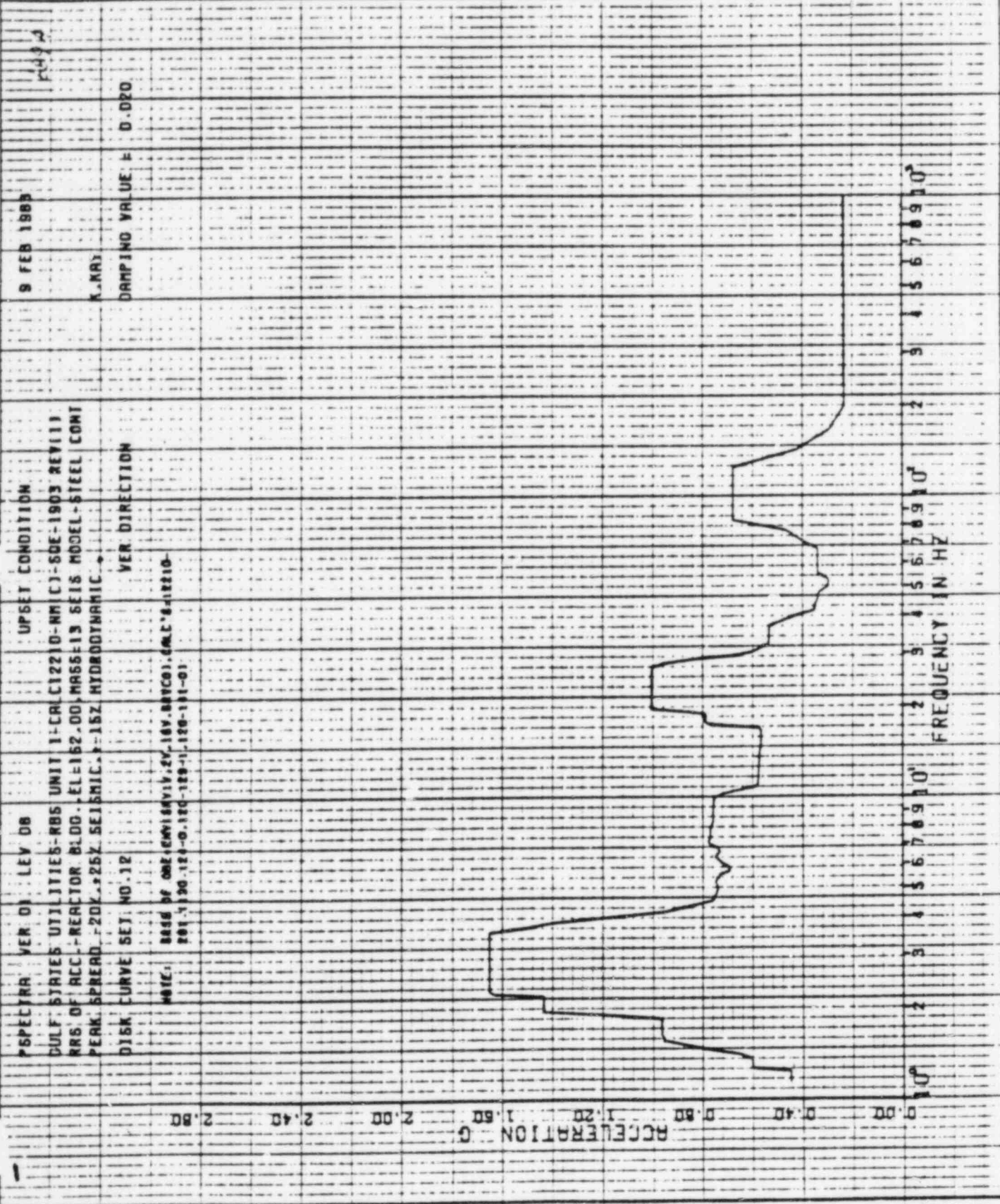
SPECTRA VER 01 LEV 08
 DULF STAYS UTILITE6-R05 UNIT 1-CALC12210-MNIC)-S0E-1903-REV111
 NR6 OF ACC.-REAR FOR ALDO.-EL-162.00, MASS=13 SE16 MODEL-STEEL COM
 PERK SPREAD -202.35Z SEISMIC.-15Z HYDRODYNAMIC
 DISK CURVE SET NO.12 MOR DIRECTION

NOTE: BASE OF ONE-GWIAV19.27,10V.NAVCO).CALC'S=12210-
 201.130.124-0.120-179-1.120-111-0)

ACCELERATION - G
 2.80 2.40 2.00 1.50 1.20 1.00 0.80 0.60 0.40 0.20 0.10



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



SPECTRA VER 01 LEV 08
 DULF STATES UTILITIES-RBS UNIT 1-CALCT2210-NM C)-SDE-1903 REV111
 RBS OF ACC.-REACTOR BLDG.-ELL-162.00 MASS-13 SETS MODEL-STEEL CONT
 PEAK SPREAD -20% 25% SEISMIC. P-15Z HYDRODYNAMIC
 DISK CURVE SET NO. 12

NOTE: BASE OF ONE CONTAINED IN 16V.BATCO).CALC. 6-11210-
 201-1190-124-0-120-120-1-120-111-0

UPSET CONDITION
 VER DIRECTION

9 FEB 1983
 K.M.AJ
 DAMPING VALUE = 0.020

PL 49

5734

8 FEB 1969

FAULTED CONDITION

SPECTRA VER 01 LEV 08

DULF STATES UTILITIES-RBS UNIT 1-CALC12210-MM(C)-SDE-1903 REV(1)
RMS OF ACC.-REACTOR BLDG.-EL=162.00, MASS=15 SEIS MODEL-STEEL CONT
PEAK SPREAD, +20%,-25%, SEISMIC-P-15Z HYDRODYNAMIC

DISK CURVE SET NO.12 VER DIRECTION

NOTE: MASS OF 56Z+2MVB18V14, 2V, 18V, 8V, 10V, 11V, 12V, 13V, 14V, 15V, 16V, 17V, 18V, 19V, 20V, 21V, 22V, 23V, 24V, 25V, 26V, 27V, 28V, 29V, 30V, 31V, 32V, 33V, 34V, 35V, 36V, 37V, 38V, 39V, 40V, 41V, 42V, 43V, 44V, 45V, 46V, 47V, 48V, 49V, 50V, 51V, 52V, 53V, 54V, 55V, 56V, 57V, 58V, 59V, 60V, 61V, 62V, 63V, 64V, 65V, 66V, 67V, 68V, 69V, 70V, 71V, 72V, 73V, 74V, 75V, 76V, 77V, 78V, 79V, 80V, 81V, 82V, 83V, 84V, 85V, 86V, 87V, 88V, 89V, 90V, 91V, 92V, 93V, 94V, 95V, 96V, 97V, 98V, 99V, 100V, 101V, 102V, 103V, 104V, 105V, 106V, 107V, 108V, 109V, 110V, 111V, 112V, 113V, 114V, 115V, 116V, 117V, 118V, 119V, 120V, 121V, 122V, 123V, 124V, 125V, 126V, 127V, 128V, 129V, 130V, 131V, 132V, 133V, 134V, 135V, 136V, 137V, 138V, 139V, 140V, 141V, 142V, 143V, 144V, 145V, 146V, 147V, 148V, 149V, 150V, 151V, 152V, 153V, 154V, 155V, 156V, 157V, 158V, 159V, 160V, 161V, 162V, 163V, 164V, 165V, 166V, 167V, 168V, 169V, 170V, 171V, 172V, 173V, 174V, 175V, 176V, 177V, 178V, 179V, 180V, 181V, 182V, 183V, 184V, 185V, 186V, 187V, 188V, 189V, 190V, 191V, 192V, 193V, 194V, 195V, 196V, 197V, 198V, 199V, 200V, 201V, 202V, 203V, 204V, 205V, 206V, 207V, 208V, 209V, 210V, 211V, 212V, 213V, 214V, 215V, 216V, 217V, 218V, 219V, 220V, 221V, 222V, 223V, 224V, 225V, 226V, 227V, 228V, 229V, 230V, 231V, 232V, 233V, 234V, 235V, 236V, 237V, 238V, 239V, 240V, 241V, 242V, 243V, 244V, 245V, 246V, 247V, 248V, 249V, 250V, 251V, 252V, 253V, 254V, 255V, 256V, 257V, 258V, 259V, 260V, 261V, 262V, 263V, 264V, 265V, 266V, 267V, 268V, 269V, 270V, 271V, 272V, 273V, 274V, 275V, 276V, 277V, 278V, 279V, 280V, 281V, 282V, 283V, 284V, 285V, 286V, 287V, 288V, 289V, 290V, 291V, 292V, 293V, 294V, 295V, 296V, 297V, 298V, 299V, 300V, 301V, 302V, 303V, 304V, 305V, 306V, 307V, 308V, 309V, 310V, 311V, 312V, 313V, 314V, 315V, 316V, 317V, 318V, 319V, 320V, 321V, 322V, 323V, 324V, 325V, 326V, 327V, 328V, 329V, 330V, 331V, 332V, 333V, 334V, 335V, 336V, 337V, 338V, 339V, 340V, 341V, 342V, 343V, 344V, 345V, 346V, 347V, 348V, 349V, 350V, 351V, 352V, 353V, 354V, 355V, 356V, 357V, 358V, 359V, 360V, 361V, 362V, 363V, 364V, 365V, 366V, 367V, 368V, 369V, 370V, 371V, 372V, 373V, 374V, 375V, 376V, 377V, 378V, 379V, 380V, 381V, 382V, 383V, 384V, 385V, 386V, 387V, 388V, 389V, 390V, 391V, 392V, 393V, 394V, 395V, 396V, 397V, 398V, 399V, 400V, 401V, 402V, 403V, 404V, 405V, 406V, 407V, 408V, 409V, 410V, 411V, 412V, 413V, 414V, 415V, 416V, 417V, 418V, 419V, 420V, 421V, 422V, 423V, 424V, 425V, 426V, 427V, 428V, 429V, 430V, 431V, 432V, 433V, 434V, 435V, 436V, 437V, 438V, 439V, 440V, 441V, 442V, 443V, 444V, 445V, 446V, 447V, 448V, 449V, 450V, 451V, 452V, 453V, 454V, 455V, 456V, 457V, 458V, 459V, 460V, 461V, 462V, 463V, 464V, 465V, 466V, 467V, 468V, 469V, 470V, 471V, 472V, 473V, 474V, 475V, 476V, 477V, 478V, 479V, 480V, 481V, 482V, 483V, 484V, 485V, 486V, 487V, 488V, 489V, 490V, 491V, 492V, 493V, 494V, 495V, 496V, 497V, 498V, 499V, 500V, 501V, 502V, 503V, 504V, 505V, 506V, 507V, 508V, 509V, 510V, 511V, 512V, 513V, 514V, 515V, 516V, 517V, 518V, 519V, 520V, 521V, 522V, 523V, 524V, 525V, 526V, 527V, 528V, 529V, 530V, 531V, 532V, 533V, 534V, 535V, 536V, 537V, 538V, 539V, 540V, 541V, 542V, 543V, 544V, 545V, 546V, 547V, 548V, 549V, 550V, 551V, 552V, 553V, 554V, 555V, 556V, 557V, 558V, 559V, 560V, 561V, 562V, 563V, 564V, 565V, 566V, 567V, 568V, 569V, 570V, 571V, 572V, 573V, 574V, 575V, 576V, 577V, 578V, 579V, 580V, 581V, 582V, 583V, 584V, 585V, 586V, 587V, 588V, 589V, 590V, 591V, 592V, 593V, 594V, 595V, 596V, 597V, 598V, 599V, 600V, 601V, 602V, 603V, 604V, 605V, 606V, 607V, 608V, 609V, 610V, 611V, 612V, 613V, 614V, 615V, 616V, 617V, 618V, 619V, 620V, 621V, 622V, 623V, 624V, 625V, 626V, 627V, 628V, 629V, 630V, 631V, 632V, 633V, 634V, 635V, 636V, 637V, 638V, 639V, 640V, 641V, 642V, 643V, 644V, 645V, 646V, 647V, 648V, 649V, 650V, 651V, 652V, 653V, 654V, 655V, 656V, 657V, 658V, 659V, 660V, 661V, 662V, 663V, 664V, 665V, 666V, 667V, 668V, 669V, 670V, 671V, 672V, 673V, 674V, 675V, 676V, 677V, 678V, 679V, 680V, 681V, 682V, 683V, 684V, 685V, 686V, 687V, 688V, 689V, 690V, 691V, 692V, 693V, 694V, 695V, 696V, 697V, 698V, 699V, 700V, 701V, 702V, 703V, 704V, 705V, 706V, 707V, 708V, 709V, 710V, 711V, 712V, 713V, 714V, 715V, 716V, 717V, 718V, 719V, 720V, 721V, 722V, 723V, 724V, 725V, 726V, 727V, 728V, 729V, 730V, 731V, 732V, 733V, 734V, 735V, 736V, 737V, 738V, 739V, 740V, 741V, 742V, 743V, 744V, 745V, 746V, 747V, 748V, 749V, 750V, 751V, 752V, 753V, 754V, 755V, 756V, 757V, 758V, 759V, 760V, 761V, 762V, 763V, 764V, 765V, 766V, 767V, 768V, 769V, 770V, 771V, 772V, 773V, 774V, 775V, 776V, 777V, 778V, 779V, 780V, 781V, 782V, 783V, 784V, 785V, 786V, 787V, 788V, 789V, 790V, 791V, 792V, 793V, 794V, 795V, 796V, 797V, 798V, 799V, 800V, 801V, 802V, 803V, 804V, 805V, 806V, 807V, 808V, 809V, 810V, 811V, 812V, 813V, 814V, 815V, 816V, 817V, 818V, 819V, 820V, 821V, 822V, 823V, 824V, 825V, 826V, 827V, 828V, 829V, 830V, 831V, 832V, 833V, 834V, 835V, 836V, 837V, 838V, 839V, 840V, 841V, 842V, 843V, 844V, 845V, 846V, 847V, 848V, 849V, 850V, 851V, 852V, 853V, 854V, 855V, 856V, 857V, 858V, 859V, 860V, 861V, 862V, 863V, 864V, 865V, 866V, 867V, 868V, 869V, 870V, 871V, 872V, 873V, 874V, 875V, 876V, 877V, 878V, 879V, 880V, 881V, 882V, 883V, 884V, 885V, 886V, 887V, 888V, 889V, 890V, 891V, 892V, 893V, 894V, 895V, 896V, 897V, 898V, 899V, 900V, 901V, 902V, 903V, 904V, 905V, 906V, 907V, 908V, 909V, 910V, 911V, 912V, 913V, 914V, 915V, 916V, 917V, 918V, 919V, 920V, 921V, 922V, 923V, 924V, 925V, 926V, 927V, 928V, 929V, 930V, 931V, 932V, 933V, 934V, 935V, 936V, 937V, 938V, 939V, 940V, 941V, 942V, 943V, 944V, 945V, 946V, 947V, 948V, 949V, 950V, 951V, 952V, 953V, 954V, 955V, 956V, 957V, 958V, 959V, 960V, 961V, 962V, 963V, 964V, 965V, 966V, 967V, 968V, 969V, 970V, 971V, 972V, 973V, 974V, 975V, 976V, 977V, 978V, 979V, 980V, 981V, 982V, 983V, 984V, 985V, 986V, 987V, 988V, 989V, 990V, 991V, 992V, 993V, 994V, 995V, 996V, 997V, 998V, 999V, 1000V, 1001V, 1002V, 1003V, 1004V, 1005V, 1006V, 1007V, 1008V, 1009V, 1010V, 1011V, 1012V, 1013V, 1014V, 1015V, 1016V, 1017V, 1018V, 1019V, 1020V, 1021V, 1022V, 1023V, 1024V, 1025V, 1026V, 1027V, 1028V, 1029V, 1030V, 1031V, 1032V, 1033V, 1034V, 1035V, 1036V, 1037V, 1038V, 1039V, 1040V, 1041V, 1042V, 1043V, 1044V, 1045V, 1046V, 1047V, 1048V, 1049V, 1050V, 1051V, 1052V, 1053V, 1054V, 1055V, 1056V, 1057V, 1058V, 1059V, 1060V, 1061V, 1062V, 1063V, 1064V, 1065V, 1066V, 1067V, 1068V, 1069V, 1070V, 1071V, 1072V, 1073V, 1074V, 1075V, 1076V, 1077V, 1078V, 1079V, 1080V, 1081V, 1082V, 1083V, 1084V, 1085V, 1086V, 1087V, 1088V, 1089V, 1090V, 1091V, 1092V, 1093V, 1094V, 1095V, 1096V, 1097V, 1098V, 1099V, 1100V, 1101V, 1102V, 1103V, 1104V, 1105V, 1106V, 1107V, 1108V, 1109V, 1110V, 1111V, 1112V, 1113V, 1114V, 1115V, 1116V, 1117V, 1118V, 1119V, 1120V, 1121V, 1122V, 1123V, 1124V, 1125V, 1126V, 1127V, 1128V, 1129V, 1130V, 1131V, 1132V, 1133V, 1134V, 1135V, 1136V, 1137V, 1138V, 1139V, 1140V, 1141V, 1142V, 1143V, 1144V, 1145V, 1146V, 1147V, 1148V, 1149V, 1150V, 1151V, 1152V, 1153V, 1154V, 1155V, 1156V, 1157V, 1158V, 1159V, 1160V, 1161V, 1162V, 1163V, 1164V, 1165V, 1166V, 1167V, 1168V, 1169V, 1170V, 1171V, 1172V, 1173V, 1174V, 1175V, 1176V, 1177V, 1178V, 1179V, 1180V, 1181V, 1182V, 1183V, 1184V, 1185V, 1186V, 1187V, 1188V, 1189V, 1190V, 1191V, 1192V, 1193V, 1194V, 1195V, 1196V, 1197V, 1198V, 1199V, 1200V, 1201V, 1202V, 1203V, 1204V, 1205V, 1206V, 1207V, 1208V, 1209V, 1210V, 1211V, 1212V, 1213V, 1214V, 1215V, 1216V, 1217V, 1218V, 1219V, 1220V, 1221V, 1222V, 1223V, 1224V, 1225V, 1226V, 1227V, 1228V, 1229V, 1230V, 1231V, 1232V, 1233V, 1234V, 1235V, 1236V, 1237V, 1238V, 1239V, 1240V, 1241V, 1242V, 1243V, 1244V, 1245V, 1246V, 1247V, 1248V, 1249V, 1250V, 1251V, 1252V, 1253V, 1254V, 1255V, 1256V, 1257V, 1258V, 1259V, 1260V, 1261V, 1262V, 1263V, 1264V, 1265V, 1266V, 1267V, 1268V, 1269V, 1270V, 1271V, 1272V, 1273V, 1274V, 1275V, 1276V, 1277V, 1278V, 1279V, 1280V, 1281V, 1282V, 1283V, 1284V, 1285V, 1286V, 1287V, 1288V, 1289V, 1290V, 1291V, 1292V, 1293V, 1294V, 1295V, 1296V, 1297V, 1298V, 1299V, 1300V, 1301V, 1302V, 1303V, 1304V, 1305V, 1306V, 1307V, 1308V, 1309V, 1310V, 1311V, 1312V, 1313V, 1314V, 1315V, 1316V, 1317V, 1318V, 1319V, 1320V, 1321V, 1322V, 1323V, 1324V, 1325V, 1326V, 1327V, 1328V, 1329V, 1330V, 1331V, 1332V, 1333V, 1334V, 1335V, 1336V, 1337V, 1338V, 1339V, 1340V, 1341V, 1342V, 1343V, 1344V, 1345V, 1346V, 1347V, 1348V, 1349V, 1350V, 1351V, 1352V, 1353V, 1354V, 1355V, 1356V, 1357V, 1358V, 1359V, 1360V, 1361V, 1362V, 1363V, 1364V, 1365V, 1366V, 1367V, 1368V, 1369V, 1370V, 1371V, 1372V, 1373V, 1374V, 1375V, 1376V, 1377V, 1378V, 1379V, 1380V, 1381V, 1382V, 1383V, 1384V, 1385V, 1386V, 1387V, 1388V, 1389V, 1390V, 1391V, 1392V, 1393V, 1394V, 1395V, 1396V, 1397V, 1398V, 1399V, 1400V, 1401V, 1402V, 1403V, 1404V, 1405V, 1406V, 1407V, 1408V, 1409V, 1410V, 1411V, 1412V, 1413V, 1414V, 1415V, 1416V, 1417V, 1418V, 1419V, 1420V, 1421V, 1422V, 1423V, 1424V, 1425V, 1426V, 1427V, 1428V, 1429V, 1430V, 1431V, 1432V, 1433V, 1434V, 1435V, 1436V, 1437V, 1438V, 1439V, 1440V, 1441V, 1442V, 1443V, 1444V, 1445V, 1446V, 1447V, 1448V, 1449V, 1450V, 1451V, 1452V, 1453V, 1454V, 1455V, 1456V, 1457V, 1458V, 1459V, 1460V, 1461V, 1462V, 1463V, 1464V, 1465V, 1466V, 1467V, 1468V, 1469V, 1470V, 1471V, 1472V, 1473V, 1474V, 1475V, 1476V, 1477V, 1478V, 1479V, 1480V, 1481V, 1482V, 1483V, 1484V, 1485V, 1486V, 1487V, 1488V, 1489V, 1490V, 1491V, 1492V, 1493V, 1494V, 1495V, 1496V, 1497V, 1498V, 1499V, 1500V, 1501V, 1502V, 1503V, 1504V, 1505V, 1506V, 1507V, 1508V, 1509V, 1510V, 1511V, 1512V, 1513V, 1514V, 1515V, 1516V, 1517V, 1518V, 1519V, 1520V, 1521V, 1522V, 1523V, 1524V, 1525V, 1526V, 1527V, 1528V, 1529V, 1530V, 1531V, 1532V, 1533V, 1534V, 1535V, 1536V, 1537V, 1538V, 1539V, 1540V, 1541V, 1542V, 1543V, 1544V, 1545V, 1546V, 1547V, 1548V, 1549V, 1550V, 1551V, 1552V, 1553V, 1554V, 1555V, 1556V, 1557V, 1558V, 1559V, 1560V, 1561V, 1562V, 1563V, 1564V, 1565V, 1566V, 1567V, 1568V, 1569V, 1570V, 1571V, 1572V, 1573V, 1574V, 1575V, 1576V, 1577V, 1578V, 1579V, 1580V, 1581V, 1582V, 1583V, 1584V, 1585V, 1586V, 1587V, 1588V, 1589V, 1590V, 1591V, 1592V, 1593V, 1594V, 1595V, 1596V, 1597V, 1598V, 1599V, 1600V, 1601V, 1602V, 1603V, 1604V, 1605V, 1606V, 1607V, 1608V, 1609V, 1610V, 1611V, 1612V, 1613V, 1614V, 1615V, 1616V, 1617V, 1618V, 1619V, 1620V, 1621V, 1622V, 1623V, 1624V, 1625V, 1626V, 1627V, 1628V, 1629V, 1630V, 1631V, 1632V, 1633V, 1634V, 1635V, 1636V, 1637V, 1638V, 1639V, 1640V, 1641V, 1642V, 1643V, 1644V, 1645V, 1646V, 1647V, 1648V, 1649V, 1650V, 1651V, 1652V, 1653V, 1654V, 1655V, 1656V, 1657V, 1658V, 1659V, 1660V, 1661V, 1662V, 1663V, 1664V, 1665V, 1666V, 1667V, 1668V, 1669V, 1670V, 1671V, 1672V, 1673V, 1674V, 1675V, 1676V, 1677V, 1678V, 1679V, 1680V, 1681V, 1682V, 1683V, 1684V, 1685V, 1686V, 1687V, 1688V, 1689V, 1690V, 1691V, 1692V, 1693V, 1694V, 1695V, 1696V, 1697V, 1698V, 1699V, 1700V, 1701V, 1702V, 1703V, 1704V, 1705V, 1706V, 1707V, 1708V, 1709V, 1710V, 1711V, 1712V, 1713V, 1714V, 1715V, 1716V, 1717V, 1718V, 1719V, 1720V, 1721V, 1722V, 1723V, 1724V, 1725V, 1726V, 1727V, 1728V, 1729V, 1730V, 1731V, 1732V, 1733V, 1734V, 1735V, 1736V, 1737V, 1738V, 1739V, 1740V, 1741V, 1742V, 1743V, 1744V, 1745V, 1746V, 1747V, 1748V, 1749V, 1750V, 1751V, 1752V, 1753V, 1754V, 1755V, 1756V, 1757V, 1758V, 1759V, 1760V, 1761V, 1762V, 1763V, 1764V, 1765V, 1766V, 1767V, 1768V, 1769V, 1770V, 1771V, 1772V, 1773V, 1774V, 1775V, 1776V, 1777V, 1778V, 1779V, 1780V, 1781V, 1782V, 1783V, 1784V, 1785V, 1786V, 1787V, 1788V, 1789V, 1790V, 1791V, 1792V, 1793V, 1794V, 1795V, 1796V, 1797V, 1798V, 1799V, 1800V, 1801V, 1802V, 1803V, 1804V, 1805V, 1806V, 1807V, 1808V, 1809V, 1810V, 1811V, 1812V, 1813V, 1814V, 1815V, 1816V, 1817V, 1818V, 1819V, 1820V, 1821V, 1822V, 1823V, 1824V, 1825V, 1826V, 1827V, 1828V, 1829V, 1830V, 1831V, 1832V, 1833V, 1834V, 1835V, 1836V, 1837V, 1838V, 1839V, 1840V, 1841V, 1842V, 1843V, 1844V, 1845V, 1846V, 1847V, 1848V, 1849V, 1850V, 1851V, 1852V, 1853V, 1854V, 1855V, 1856V, 1857V, 1858V, 1859V, 1860V, 1861V, 1862V, 1863V, 1864V, 1865V, 1866V, 1867V, 1868V, 1869V, 1870V

44A

9 FEB 1983

K. RAY

DAMPING VALUE = 0.020

UPSET CONDITION

SPECTRA VER 01 LEY 08

GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM(C)-SOC-1903 REV11)

MS OF ACC.-REACTOR BLOC.-CL=185.00.MASSE14 SEIS MODEL-STEEL CONT

PEAK SPREAD.-207.5257 SEISMIC.-15Z HYDRODYNAMIC

DISK CURVE SET NO.13

HOR DIRECTION

NOTE: MASS OF ONE-DIMENSIONAL 25.169.50VCO).CALC 8=2210-

201.1130.124-0.1120-129-1.120-111-0.

ACCELERATION G

0.00

0.40

0.80

1.20

1.60

2.00

2.40

2.80

3.20

3.60

4.00

4.40

4.80

5.20

5.60

6.00

6.40

6.80

7.20

7.60

8.00

8.40

8.80

9.20

9.60

10.00

10.40

10.80

11.20

11.60

12.00

12.40

12.80

13.20

13.60

14.00

14.40

14.80

15.20

15.60

16.00

16.40

16.80

17.20

17.60

18.00

18.40

18.80

19.20

19.60

20.00

20.40

20.80

21.20

21.60

22.00

22.40

22.80

23.20

23.60

24.00

24.40

24.80

25.20

25.60

26.00

26.40

26.80

27.20

27.60

28.00

28.40

28.80

29.20

29.60

30.00

30.40

30.80

31.20

31.60

32.00

32.40

32.80

33.20

33.60

34.00

34.40

34.80

35.20

35.60

36.00

36.40

36.80

37.20

37.60

38.00

38.40

38.80

39.20

39.60

40.00

40.40

40.80

41.20

41.60

42.00

42.40

42.80

43.20

43.60

44.00

44.40

44.80

45.20

45.60

46.00

46.40

46.80

47.20

47.60

48.00

48.40

48.80

49.20

49.60

50.00

50.40

50.80

51.20

51.60

52.00

52.40

52.80

53.20

53.60

54.00

54.40

54.80

55.20

55.60

56.00

56.40

56.80

57.20

57.60

58.00

58.40

58.80

59.20

59.60

60.00

60.40

60.80

61.20

61.60

62.00

62.40

62.80

63.20

63.60

64.00

64.40

64.80

65.20

65.60

66.00

66.40

66.80

67.20

67.60

68.00

68.40

68.80

69.20

69.60

70.00

70.40

70.80

71.20

71.60

72.00

72.40

72.80

73.20

73.60

74.00

74.40

74.80

75.20

75.60

76.00

76.40

76.80

77.20

77.60

78.00

78.40

78.80

79.20

79.60

80.00

80.40

80.80

81.20

81.60

82.00

82.40

82.80

83.20

83.60

84.00

84.40

84.80

85.20

85.60

86.00

86.40

86.80

87.20

87.60

88.00

88.40

88.80

89.20

89.60

90.00

90.40

90.80

91.20

91.60

92.00

92.40

92.80

93.20

93.60

94.00

94.40

94.80

95.20

95.60

96.00

96.40

96.80

97.20

97.60

98.00

98.40

98.80

99.20

99.60

100.00

100.40

100.80

101.20

101.60

102.00

102.40

102.80

103.20

103.60

104.00

104.40

104.80

105.20

105.60

106.00

106.40

106.80

107.20

107.60

108.00

108.40

108.80

109.20

109.60

110.00

110.40

110.80

111.20

111.60

112.00

112.40

112.80

113.20

113.60

114.00

114.40

114.80

115.20

64/4

8 FEB 1983

K. KAY

DAMPING VALUE = 0.070

UPSET CONDITION
 UNIT 1-CALC 12210-MM C1-SOE-1903 REV 111
 MASS 14 SEIS MODEL-STEEL CONT
 VER DIRECTION

VER DIRECTION

NOTE: BASE OF ONE (ENVIS 19 2V 16V BAYCO). CALC 6-18210-
 201.1 30.12-0.120-120-1, 120-111-0

PSPECTRA VER 01 LEV 08

CUL STATES UTILITIES-RBS UNIT 1-CALC 12210-MM C1-SOE-1903 REV 111
 RRS OF ACC.-REACTOR 9100.-EL-105-00 MASS 14 SEIS MODEL-STEEL CONT
 PEAK SPREAD -20% → 25% SEISMIC → 15% HYDRODYNAMIC

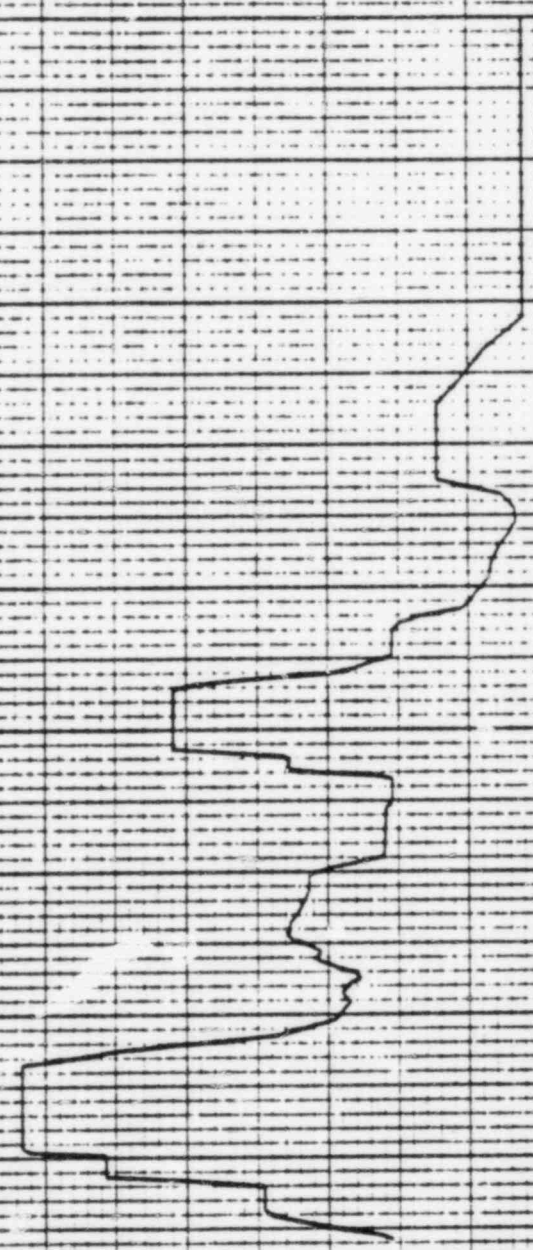
DISK CURVE SET NO. 13

ACCELERATION

FREQUENCY IN HZ

2.80 2.40 2.00 1.60 1.20 0.80 0.40 0.00

10



574A

8 FEB 1985

FAULTED CONDITION

PSPECTRA VER 01 LEV 08

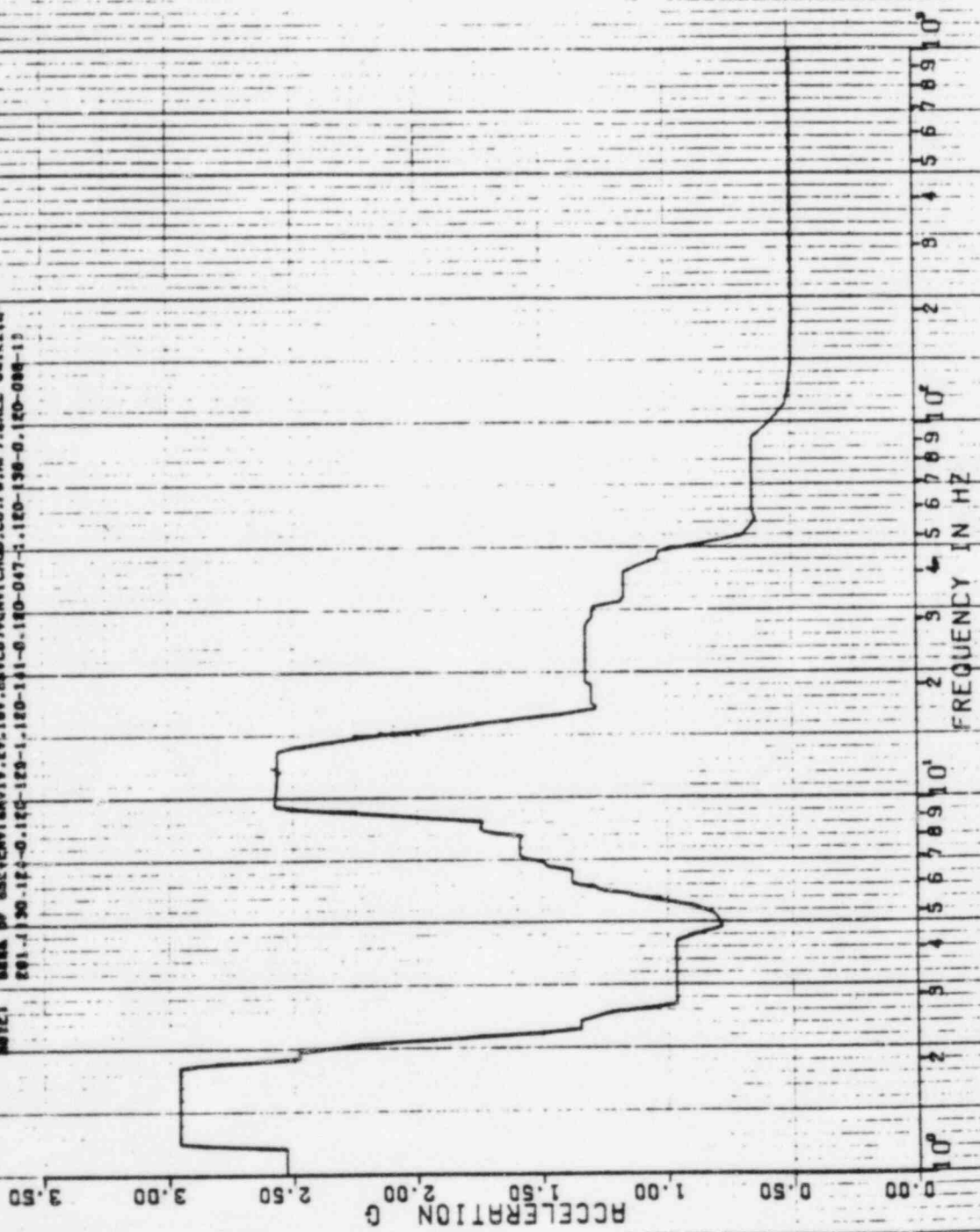
GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM(C)-50F-1903 REV(1)
RRS OF ACC.-REACTOR BLDG.-EL=105.00, MASS=14 SEIS MODEL-STEEL CONT
PEAK SPREAD, -20X, .25X SEISMIC, F=15Z, HYDRODYNAMIC

MOR DIRECTION

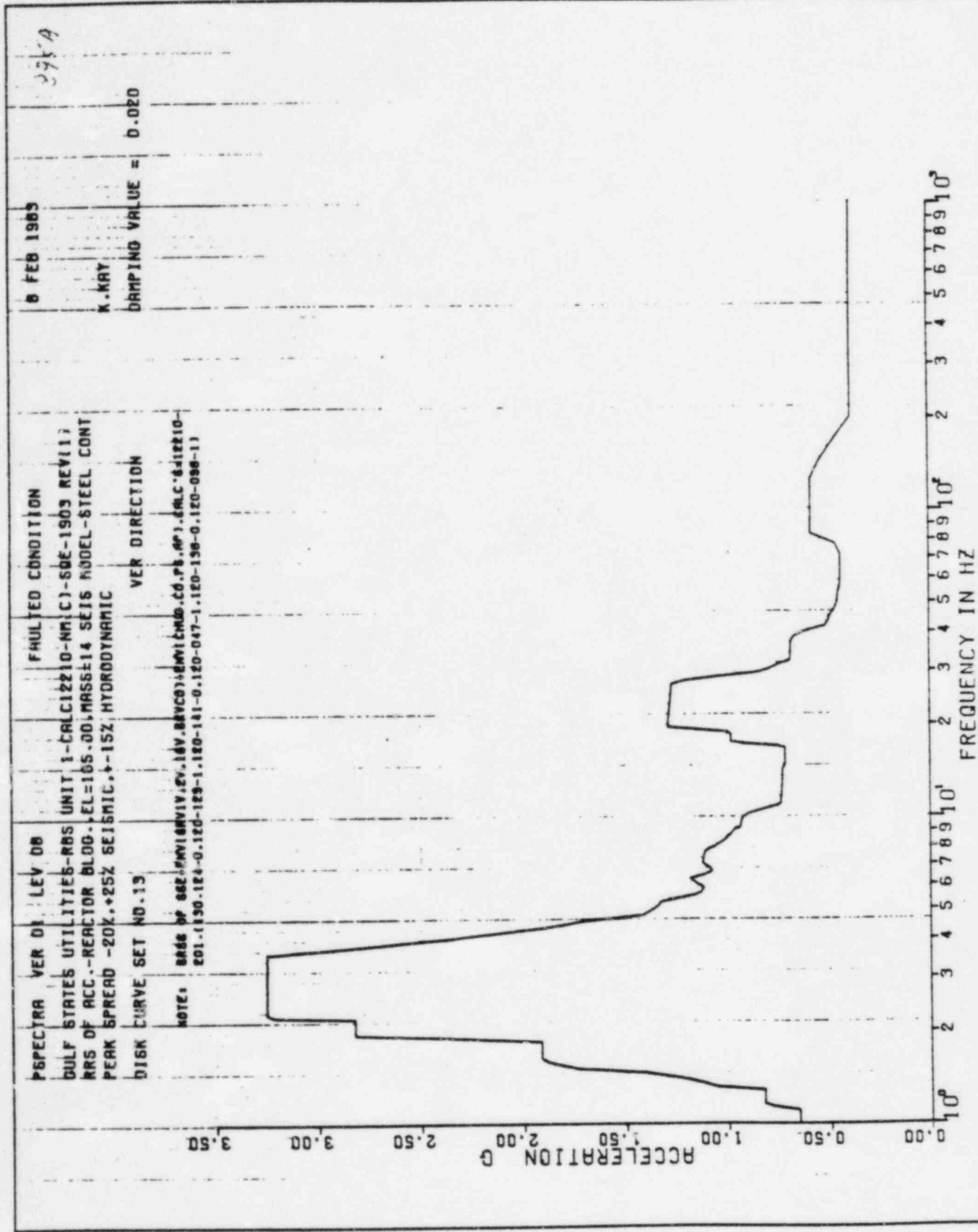
DISK CURVE SET NO. 15

NOTE: AREA BY SAC+ENVIRVIV.EV, 18V, 58VCO)+ENVICMB.CO.PS.AP1.SALC.G=10010
261.1130.124-0.110-179-1.120-141-0.110-047-1.120-136-0.120-088-13

M. MAY
DAMPING VALUE = 0.020



FREQUENCY IN HZ



9 FEB 1955

K. KRY

DAMPING VALUE = 0.050

FRUITED CONDITION

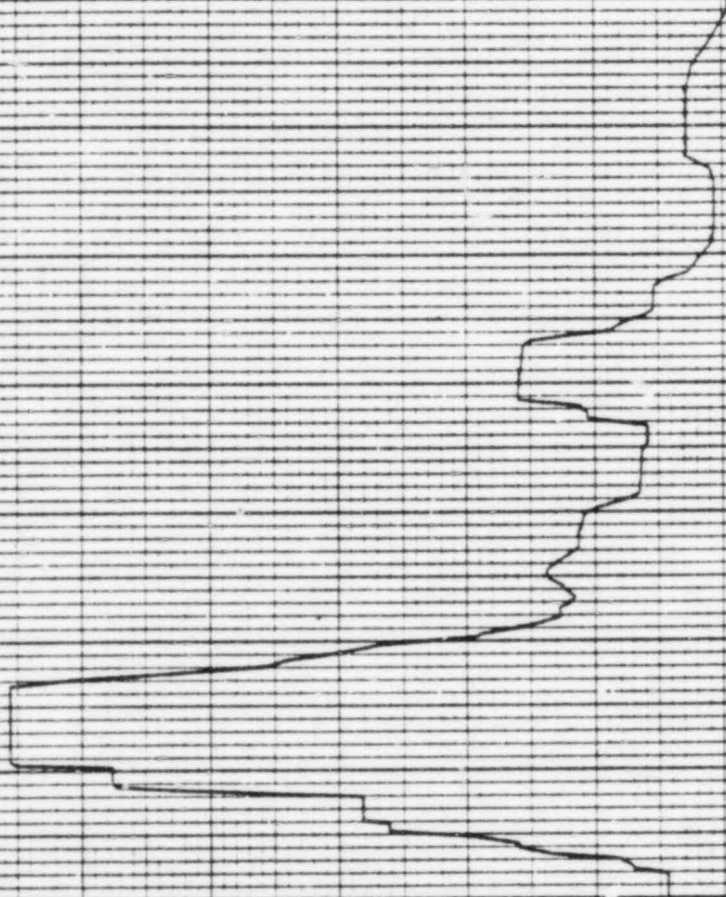
PSPECTRA VER D1 LEV 00
DOLF BYATES UTILITIES-RBS UNIT 1-CALC 12210-NM1C3-50E-1909 REV11)
RMS OF ACC.-REACTOR BLDG.-ELE=105.00, MASSE=1.6 SE16 MODEL-STEEL CONT
PERK. SP/REAR.-20K.-125Z SEISMIC.-1-15Z HYDRODYNAMIC

VER DIRECTION

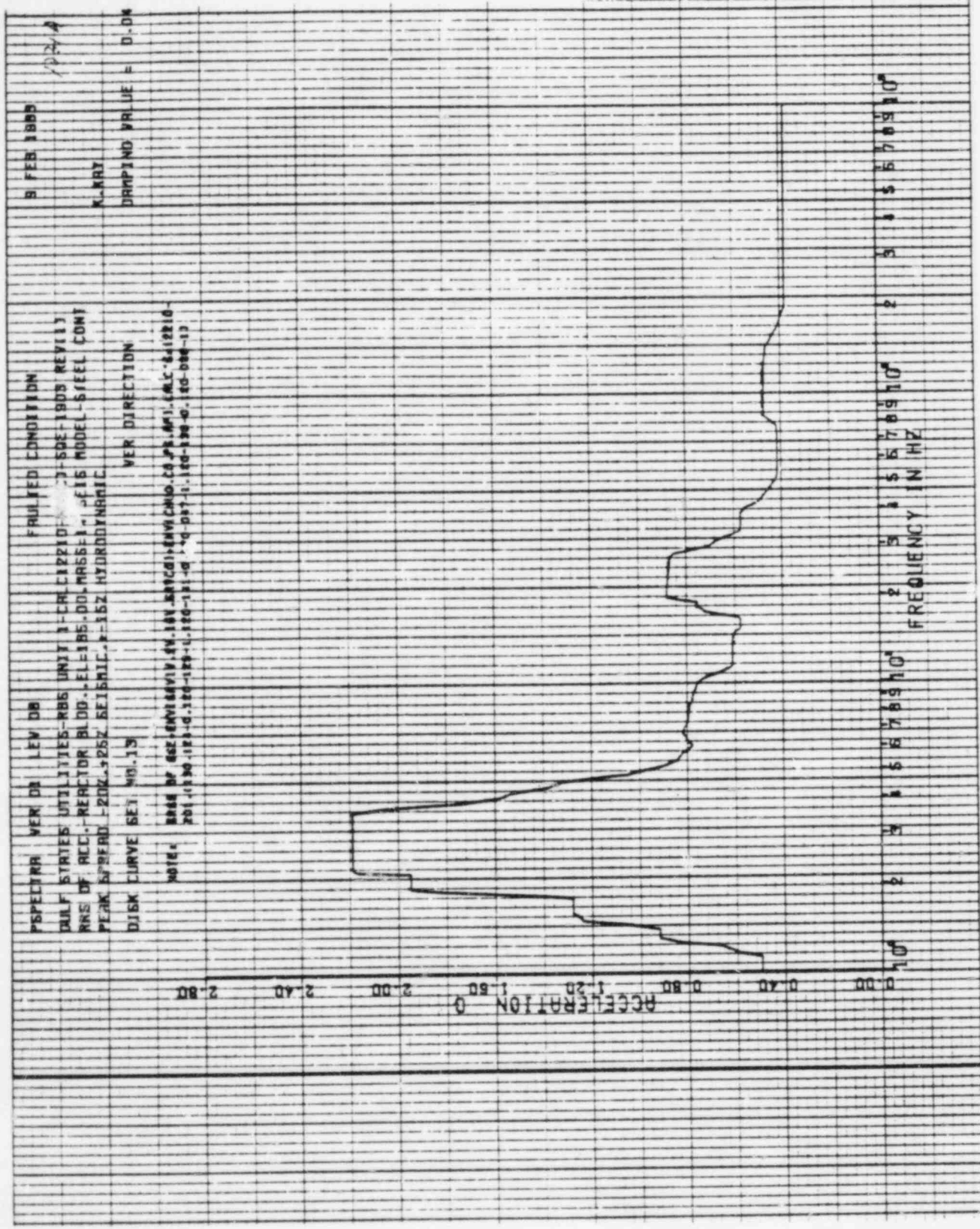
DISK CURVE SET NO. 15

NOTE: BASE OF CURVE (MAY) 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, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

ACCELERATION 0 0.50 1.00 1.50 2.00 2.50



FREQUENCY IN HZ 10^0 10^1 10^2



8 FEB 1965
 K. KRY
 DRAPING VALUE = 0.0M

FRUITED CONDITION
 SPECTRA VER DE LEV DB
 DULF STATES UTILITIES-RBS UNIV I-CR CIPZIO-7-5DE-1905 REV(1)
 RRS OF ACC.-REACTOR BLDG.-EL-185-00.MRS-1-1-715 MODEL-STEEL COMF
 PERK SPHERD -20%+25% SEISMIC.-P-15Z HYDRODYNAMIC
 DISK CURVE SET NO.15
 VER DIRECTION

NOTE: BASE OF 662-ENVISSVIV.1V.18V.887C(1)-ENVICHO.CO.PE.MPI.LMLC-2412210-
 201.1130-1129-C.120-129-121-0 *q-pst-1-110-130-c. 60-004-13

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80
 FREQUENCY IN HZ 10^0 10^0.2 10^0.4 10^0.6 10^0.8 10^1 10^1.2 10^1.4 10^1.6 10^1.8 10^2

APA

9 FEB 1983

K-RAY

DAMPING VALUE = 0.020

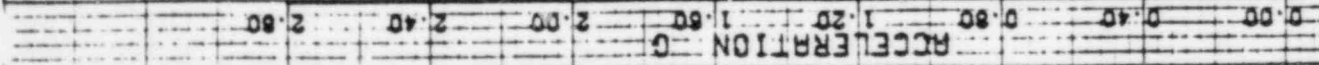
SPECTRA VER 01 LEV 08
 GULF ST 5 UTILITIES-RBS UNIT 1-CALC12210-RM C1-SOE-1903 REV111
 RRS OF NCCL-REACTOR BLDG. EL=212.00, MASS=15 SEIS MODEL-STEEL CONT
 PEAK SPREAD =20%+25% SEISMIC. P=15% HYDRODYNAMIC
 D'IS. CURVE SET NO. 11 H/R DIRECTION

H/R DIRECTION

NOTE: RRS OF ONE (CONV) 14.2V. 16V. 8AVCO). CALC # 12210-
 201.136.124-0.120-120-1.120-111-07

ACCELERATION G

FREQUENCY IN HZ



6.019

9 FEB 1968

K. KAY

DAMPING VALUE = 0.020

SPECTRA VER 01 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM(CI-SOE-1903 REV111)
 RBS OF ACC.-REACTOR BLDG. EL:2 2.00, MASS:15 SEIS MODEL-STEEL CONT
 PEAK SPREAD -20%+25% SEISMIC. -15% HYDRODYNAMIC
 D.J.K. CURVE SET NO. 14
 VER DIRECTION

NOTE: MASS OF ORIG. ENVIRONMENT 19.27, 16V. 31V(CB). CALC. # 12210-
 201. 1130.124-G. 120-129-1, 130-131-03

ACCELERATION G

FREQUENCY IN HZ

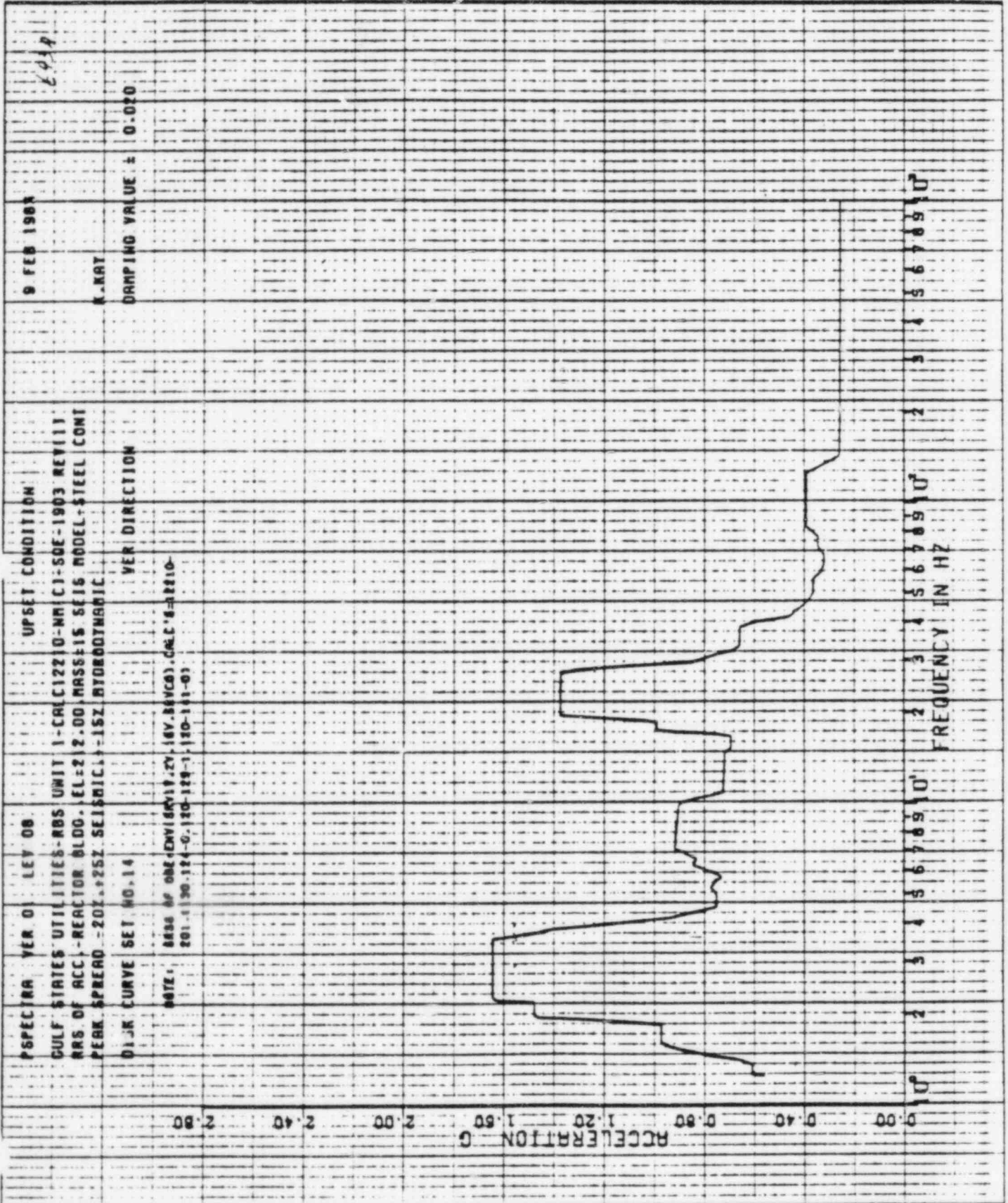
5.678910⁰

5.678910⁰

5.678910⁰

5.678910⁰

5.678910⁰



PSPECTRA VER 01 LEV 00

FAULTED CONDITION

8 FEB 1985

895A

GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NR(C)-SDE-1903 REV(1)

RHS OF ACC.-REACTOR BLDG., EL=212.00, MASS=15 SEIS MODEL-STEEL CONT

PEAK SPREAD -20%+25% SEISMIC, +-15% HYDRODYNAMIC

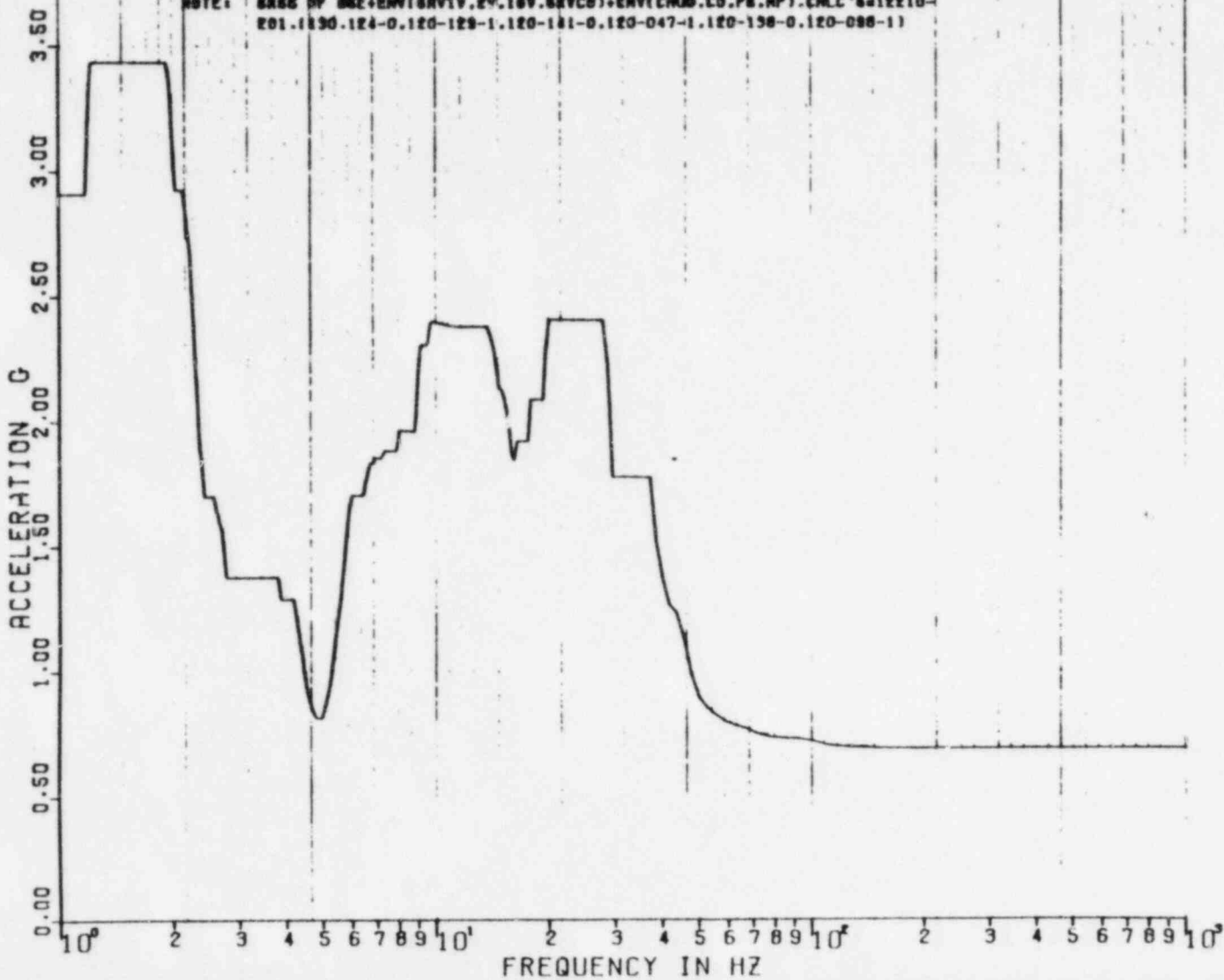
K.KAY

DISK CURVE SET NO.14

HOR DIRECTION

DAMPING VALUE = 0.020

NOTE: BASE OF BLDG (ENVISRV19, EV.10V, 80VCO), ENVICMID.CO.PS.AP1, CALC 6-12210-201.1130.124-0.120-129-1.120-131-0.120-047-1.120-130-0.120-080-1)



REF 50

PSPECTRA VER D1 LEV 08

FAULTED CONDITION

8 FEB 1965

897A

DULF STATES UTILITIES-RBS UNIT 1-CALC(2210-NM(C)-6QE-1963 REV(1))
RHS OF ACC.-REACTOR BLDG. EL=212.00 MASS=15 SEIS MODEL-STEEL CONT
PEAK SPREAD -20%+25% SEISMIC,+15% HYDRODYNAMIC

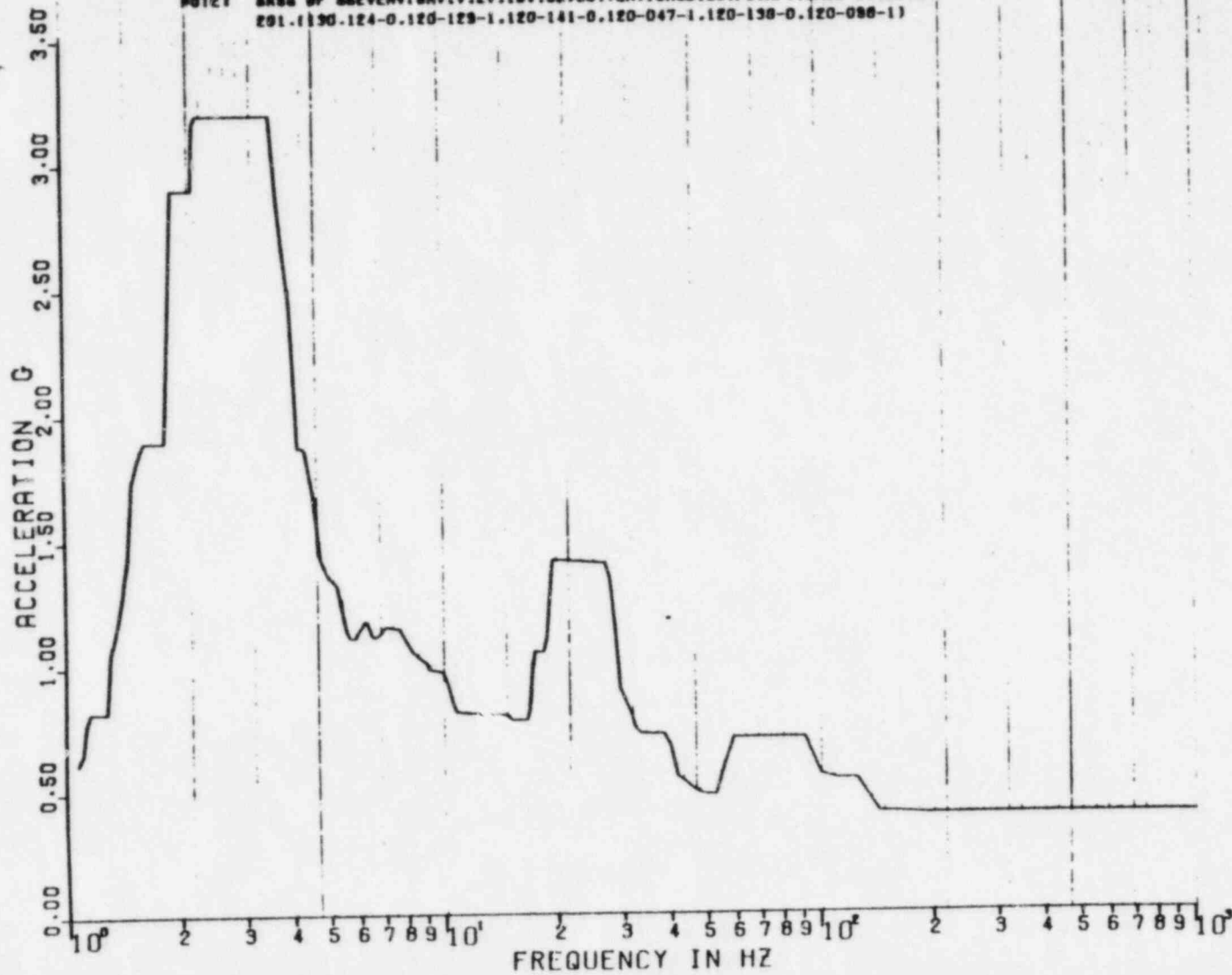
K.KAY

DAMPING VALUE = 0.020

DISK CURVE SET NO.14

VER DIRECTION

NOTE: BASE OF 88212W18V19.EV.16V.88VCO1-ENVICRUB.CO.PS.MP).CALC'S=12210-
201.1190.124-0.120-129-1.120-141-0.120-047-1.120-130-0.120-088-1)



REF 50

9 FEB 1963

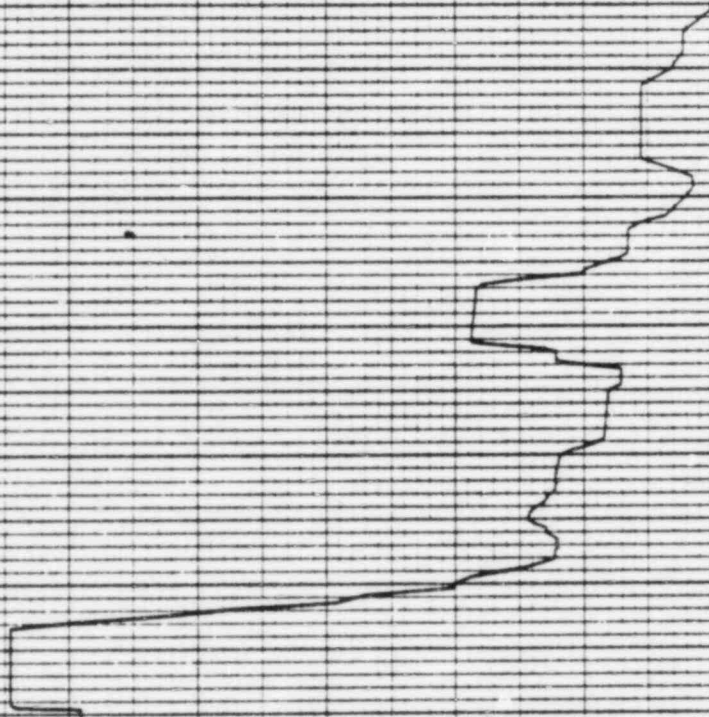
7A19
 SPECTRA VER. DI. LEV. 00
 FAULTED CONDITION
 DULF STATES UTILITIES-RMS UNIT 1-CALCIZZIO-MN(C)-502-1903 REV 11
 RMS OF REC.-REACTOR BLDG.-EL-212-DD, MASS-15 SEIS MODEL-STEEL CONT
 PERK SPREAD-70Z-75Z SEISMIC-1-15X HYDRODYNAMIC
 DISK CURVE SE: NO-1A
 VER DISPECTION

K.MAY

DAMPING VALUE = 0.050

NOTE: BASE OF 60Z-EMV168V17, EV. 16V, 8AYC07-EMV1CHD.CO.PS (M7), (M1) 612210
 201-130-121-0-120-120-1-100-111-00-120-011-1-100-120-0-120-000-1)

ACCELERATION 0 0.80 1.60 2.40 3.20 4.00 4.80 5.60 6.40 7.20 8.00



10⁰ 2 5 + 5 7 0 9 10¹ 2 5 + 5 7 0 9 10²

FREQUENCY IN HZ

9 FEB 1985

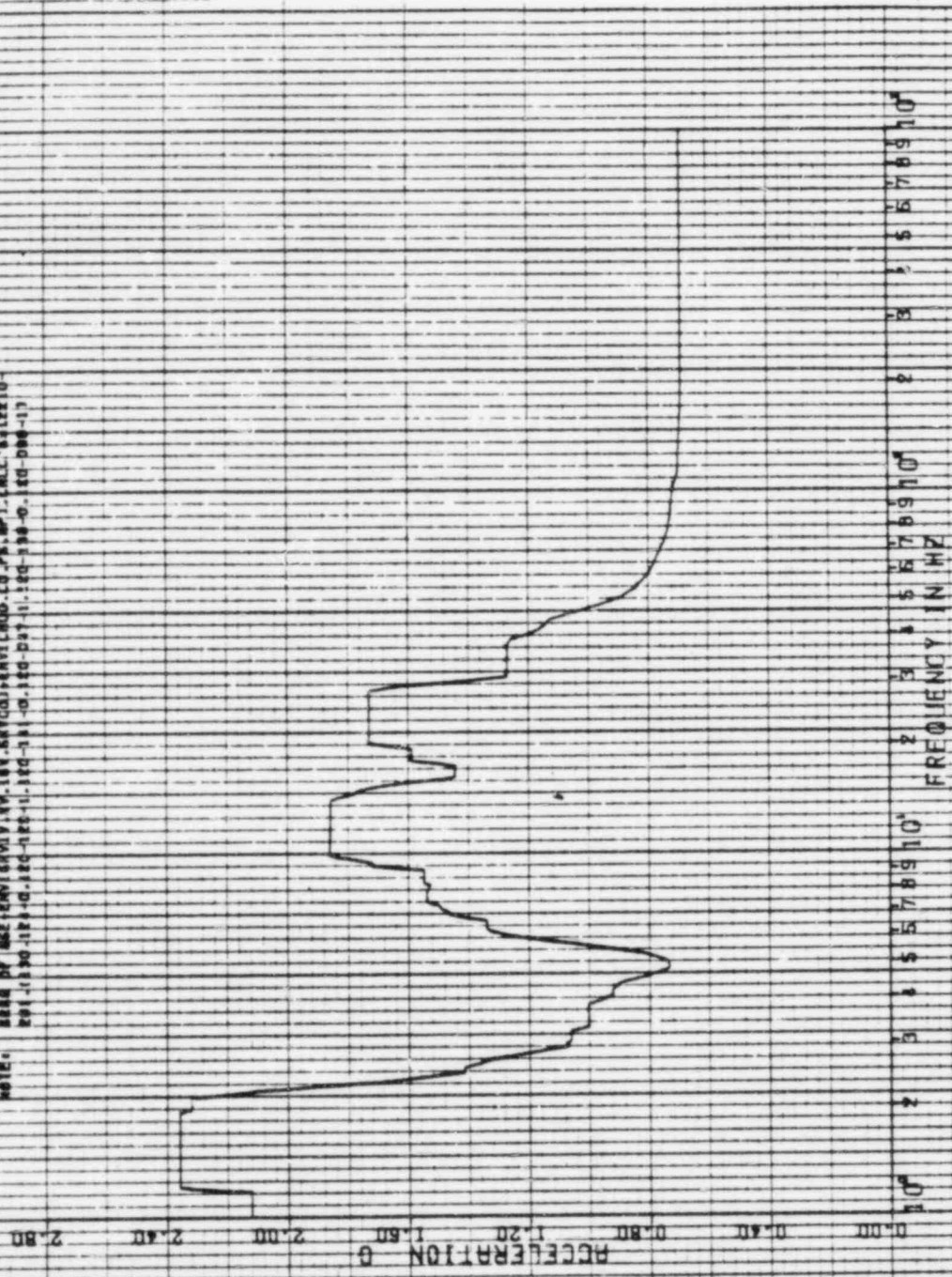
117A

K-KRZ

DAMPING VALUE = 0.041

SPECTRA VER. DB LEV DB
 FULLY STRAINING RBS ONLY I-CALCIP2ID-MNICH-SDE-1985 REV117
 NR6 OF ACC.-REACTOR BLDG.-ELECTR.00-MR65-15 SEIS MODEL-STEEL CONT
 PERK SPREAD -20Z-25Z SEISMIC-15Z HYDRODYNAMIC
 DISK CURVE SET NO. 14 HDR DIRECTION

NOTE: READ BY USE ENVIROVIV.EV.14V.NATCOI-ENVI.CMO.CO.PS.MPI.CALC.SALEZID-
 201.1130.1130-0.100-100-1.100-11-0.100-100-1.100-100-0.100-000-17



10⁰ 5.789*10⁰ 5.789*10¹ 5.789*10²

ACCELERATION

FREQUENCY IN HZ

1-118

9 FEB 1988

K. KAY

DAMPING VALUE = 0.020

UPSET CONDITION

CULF STATES UTILITIES-RBS UNIT 1-CR1C12210-WM(C)-SQE-1903 REV11)
RBS OF ACC. REACTOR BLDG., EL-299.20, MASS-16 SE16 MODEL-STEEL CONT
PEAK SPREAD -20X.325Z SEISMIC. -15Z HYDRODYNAMIC

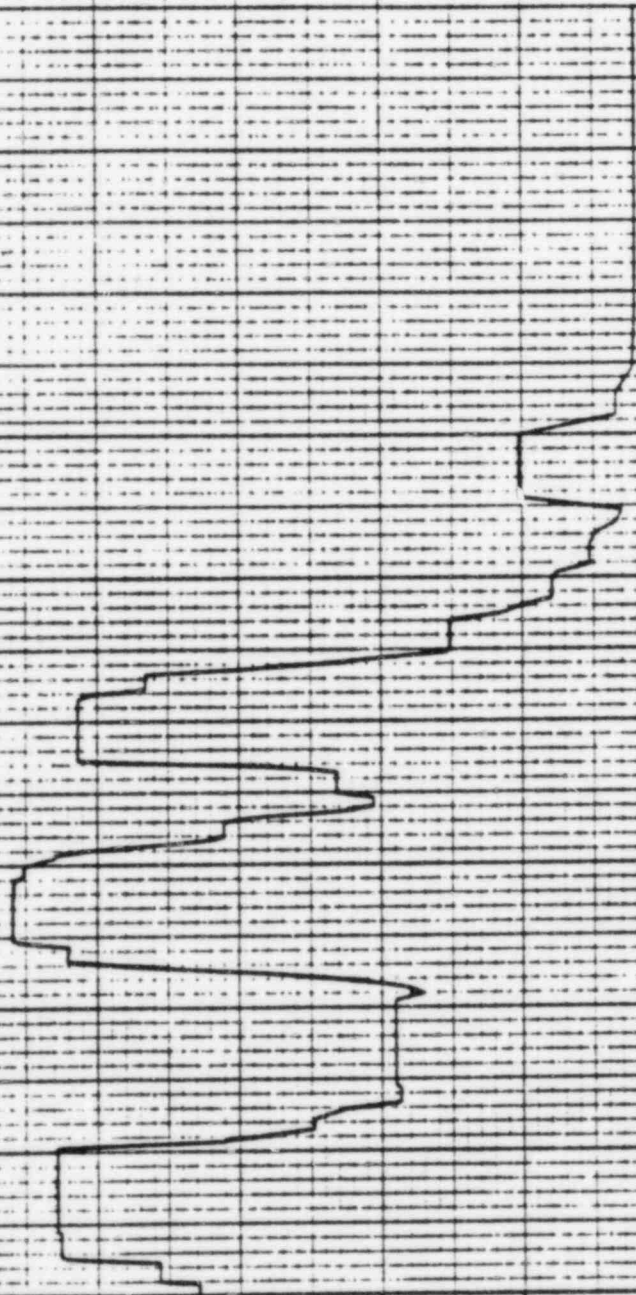
HOR DIRECTION

DISK CURVE SET NO. 15
NOTE: BASE OF ONE-2MW18AV17.2", 18V, 8AVCO1, CR1C-9-12210-
201.139.124-0.120-129-1, 120-131-0)

SPECTRA: VER. 01 LEV. 08

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

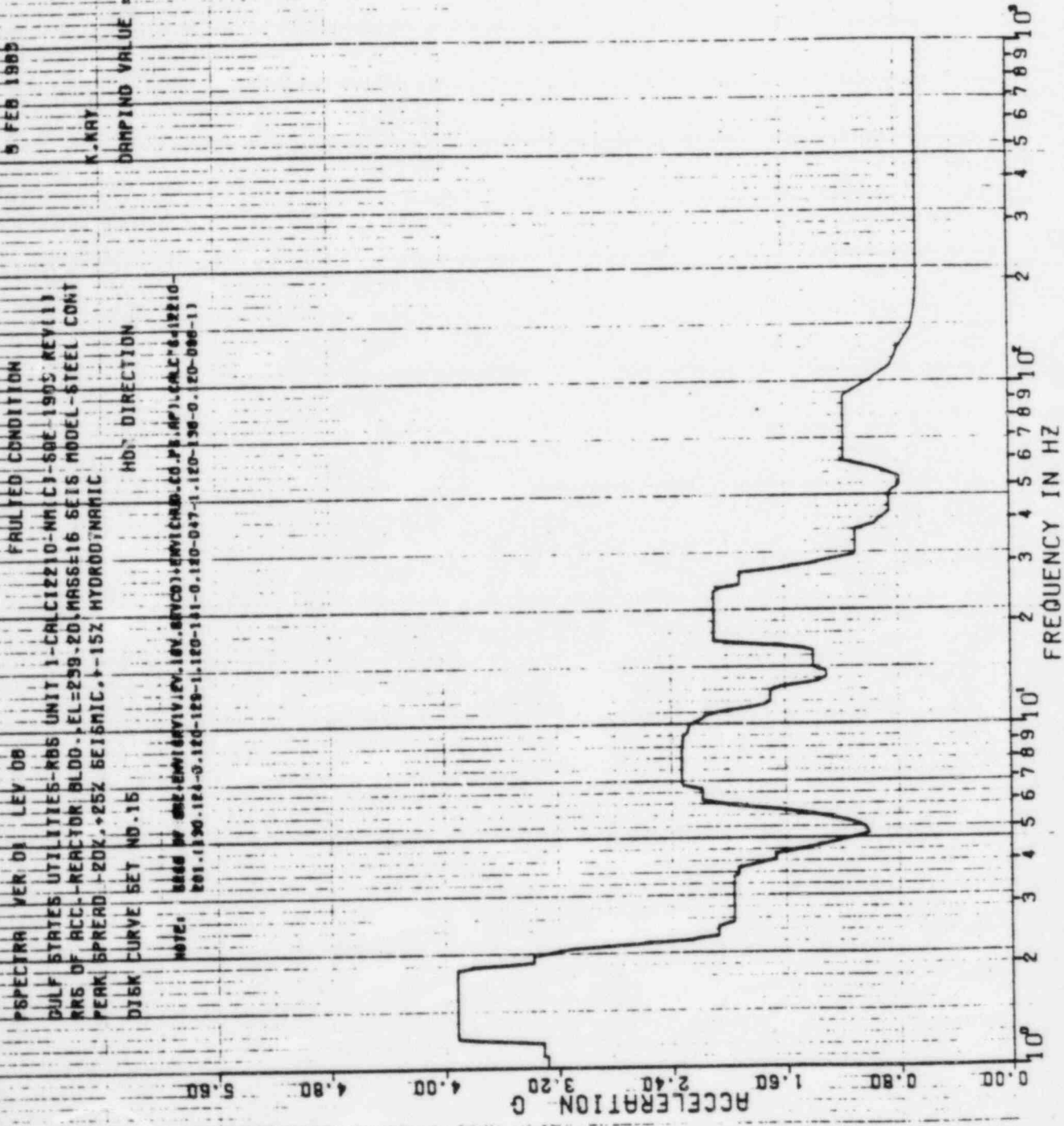
298A

5 FEB 1965

K. RAY

DAMPING VALUE = 0.050

PSPECTRA VER: 01 LEV: 08
 DULF STATES UTILITIES-RBS UNIT 1-CALCIZ210-NM1C3-50E-1905-REV111
 RRS OF ACC.-REACTOR BLDG., EL-259-20, MASS-16 SE1S, MODEL-STEEL CONT
 PEAK SPREAD -20Z,+25Z SE16MIC.-15Z HYDRODYNAMIC
 DISK CURVE SET NO. 15 HD: DIRECTION
 NOTE: READ W/ ONE UNITARY V.I.V. 18V. SEVCO) SEVICHAB.CO. PS.MPI).CALC. 8.412210-
 201.1190-124-0.120-120-1.120-111-0.120-047-1.120-130-0.120-000-11



7874

9 FEB 1985

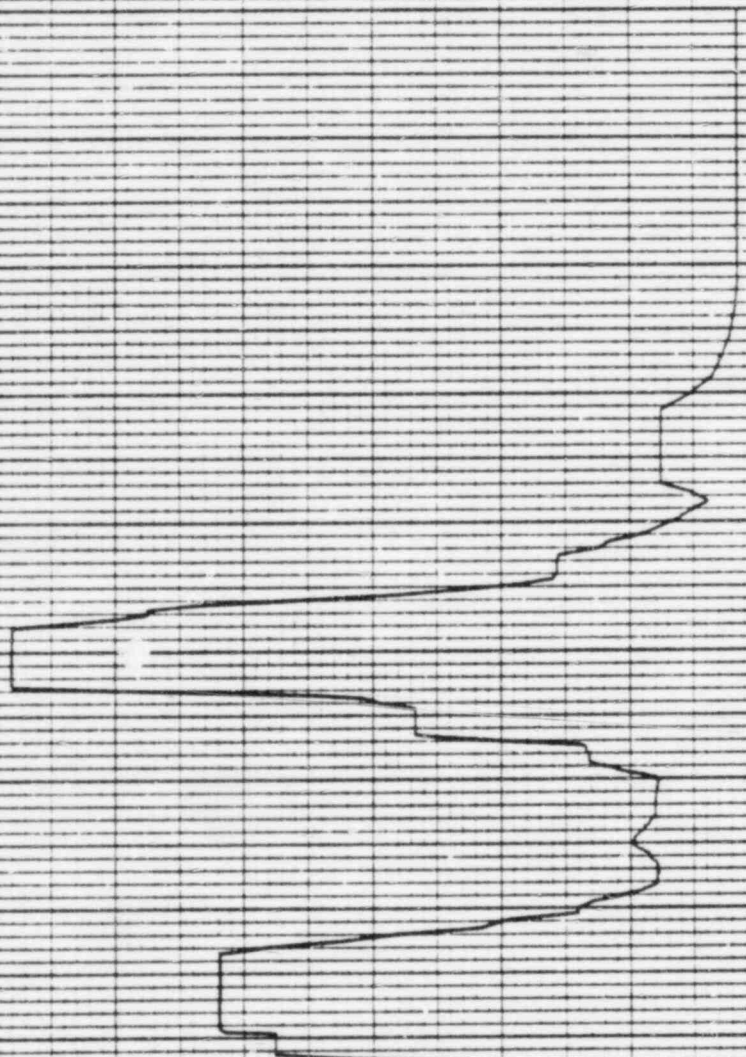
K. RAY

DAMPING VALUE = 0.050

PSPECTRA VER 01 LEV 00
 DULF STRAYS UTILITIES-RBS UNIT 1-CALCIC210-MNIC)-SSE-1903 SEY(1)
 RRS OF REC.-REACTOR BLDG., EL-295.20, NRS5:16 SE16 MODEL-STEEL COM
 PERK SPRED.-20Z.+25Z. SEISMIC.+15Z HYDRODYNAMIC
 DISK CURVE SET NO. 15 VER DIRECTION

NOTE: BASE OF 34Z-CHV SEVITY CV, 16V, 24V, 30V, 40V, 50V, 60V, 70V, 80V, 90V, 100V, 110V, 120V, 130V, 140V, 150V, 160V, 170V, 180V, 190V, 200V, 210V, 220V, 230V, 240V, 250V, 260V, 270V, 280V, 290V, 300V, 310V, 320V, 330V, 340V, 350V, 360V, 370V, 380V, 390V, 400V, 410V, 420V, 430V, 440V, 450V, 460V, 470V, 480V, 490V, 500V, 510V, 520V, 530V, 540V, 550V, 560V, 570V, 580V, 590V, 600V, 610V, 620V, 630V, 640V, 650V, 660V, 670V, 680V, 690V, 700V, 710V, 720V, 730V, 740V, 750V, 760V, 770V, 780V, 790V, 800V, 810V, 820V, 830V, 840V, 850V, 860V, 870V, 880V, 890V, 900V, 910V, 920V, 930V, 940V, 950V, 960V, 970V, 980V, 990V, 1000V

ACCELERATION G
 0.50
 1.00
 1.50
 2.00
 2.50
 3.00
 3.50



2 5 4 5 6 5 5 10⁰ 2 5 4 5 6 5 5 10¹ 2 5 4 5 6 5 5 10²
 FREQUENCY IN HZ

1549A

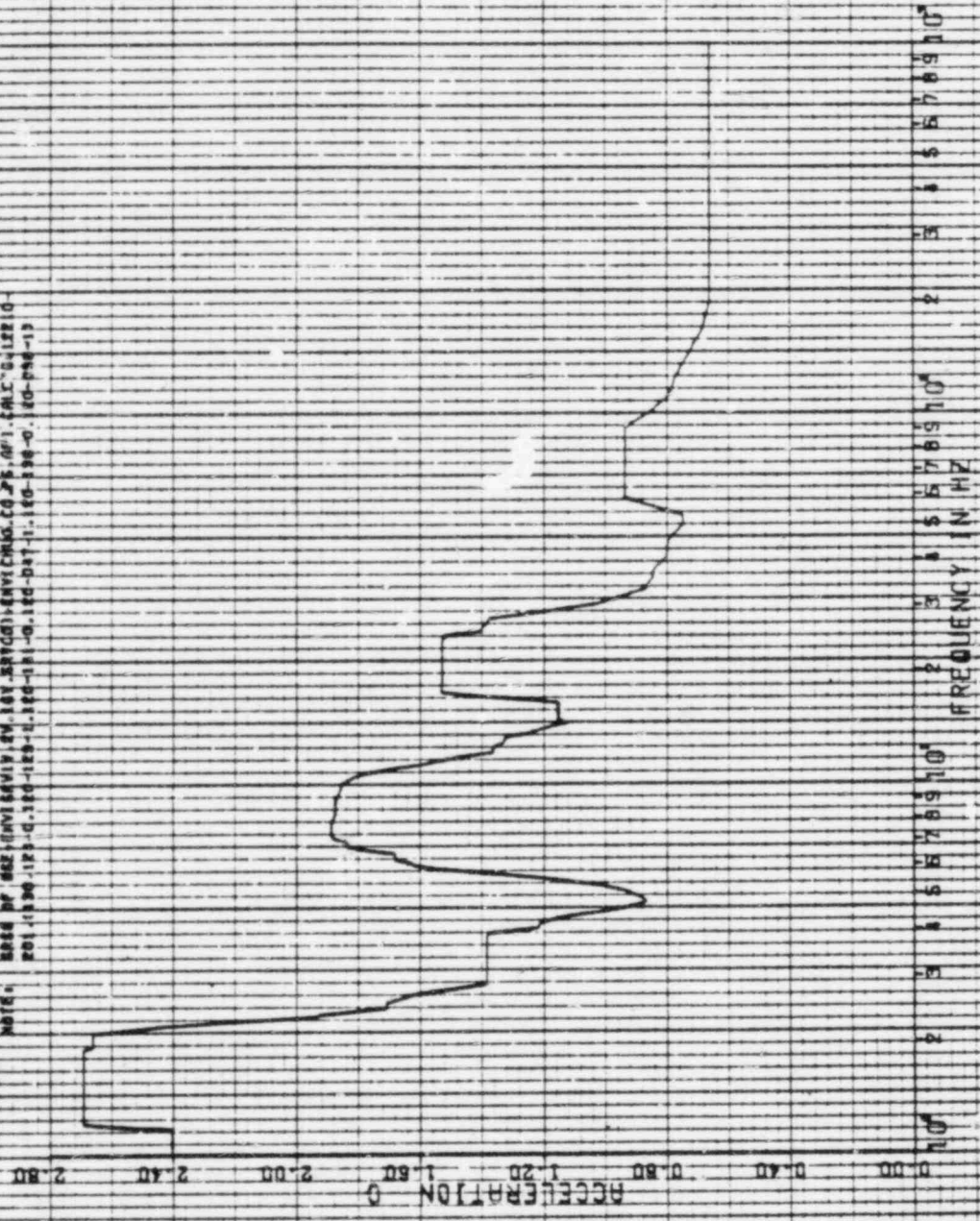
9 FEB 1965

K. XBY

DAMPING VALUE = 0.020

SPECIFIC VER DA LEY DB
 FULLY CONDITION
 DULF STATES UTILITIES-RB5 UNIT 3-CALCIPED-WDCJ-50E-1903 REV117
 WRS OF REC.-REACTOR BLDG.-EL-259-ED.MASSE-16 SETS MODEL-STEEL CONT
 PERK SPHERD -200.-25Z. SEISMIC.-15Z HYDRODYNAMIC
 DISK CURVE SET NO.15
 HOR DIRECTION

NOTE: 8866 OF 66Z (DAVID) ON 14V. 88V(01) (MICHAS. CO 75, 6P1. CAL. 6.12210-
 201.1130-123-G.100-128-L.100-121-G.100-DAT-1.100-198-O.100-098-13

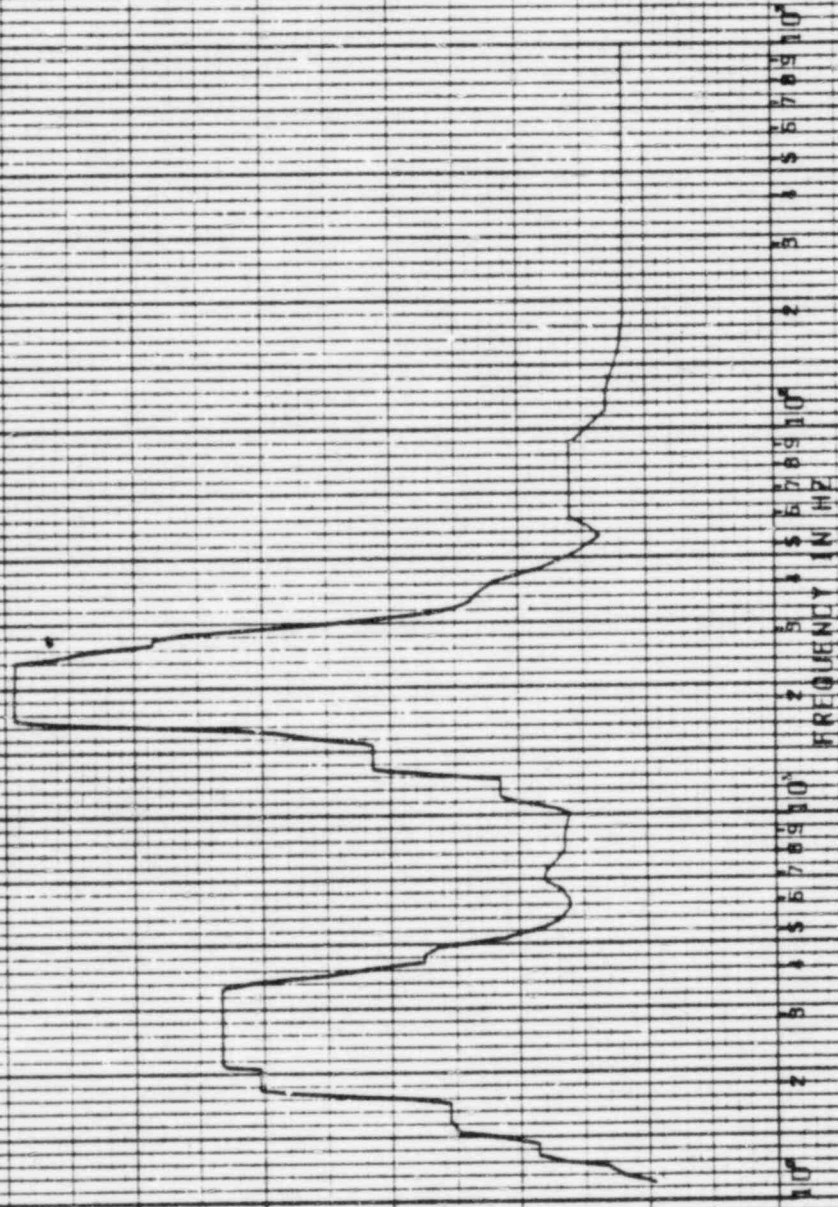


10⁰ 2 3 4 5 6 7 8 9 10¹ 2 3 4 5 6 7 8 9 10²
 FREQUENCY IN HZ

5 FEB 1968
K. RAY
DAMPING VALUE = 0.040

FAULTED CONDITION
SPECTRA VER 01 LEV 08
DULF STAYES DYLTYES-RDS UNIT 1-CALCIP210-MN17-50E-1903 REV111
RMS OF REC.-REACTOR BLDG.-EL299-PD, MASS=16 SE16 MODEL-STEEL CONT
PERK SPREAD -20X.525Z 6215MILL.15Z HYDRODYNAMIC
DISK CURVE SET NO.15
V/R DIRECTION
NOTE: MADE BY GSE-ENVISERVIVBY, INV.851501, ENVICHO.00.75.401, CALC.84122.0-
R01.130.174-0.120-129-1.120-131-0.120-137-1.120-138-0.120-140-13

ACCELERATION G
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50



10^0 10^1 5.769 x 10^1 5.769 x 10^2

FREQUENCY IN HZ

07.9

9 FEB 1985

X-KRY

DAMPING VALUE = 0.020

UPSET CONDITION
CALC 12210-NMCT-80E-1803 REV111
MRS OF ACC.-REACTOR BLDG.-EL-85.000, MASS=17 SE15 MODEL-PSM-PEDESTAL
PEAK SPREAD -20% ±25% SEISMIC.-15% HYDRODYNAMIC

HOR DIRECTION

NOTE:
BASE OF ONE-ENVELOPE, 2V, 10V, 50VCO, CALC 8-12210-
201-1130-129-0.120-129-1.120-131-0

PSPECTRA VER 01 LEV 08

DULT STATES UTILITIES-RBS UNIT 1-CALC 12210-NMCT-80E-1803 REV111
MRS OF ACC.-REACTOR BLDG.-EL-85.000, MASS=17 SE15 MODEL-PSM-PEDESTAL
PEAK SPREAD -20% ±25% SEISMIC.-15% HYDRODYNAMIC

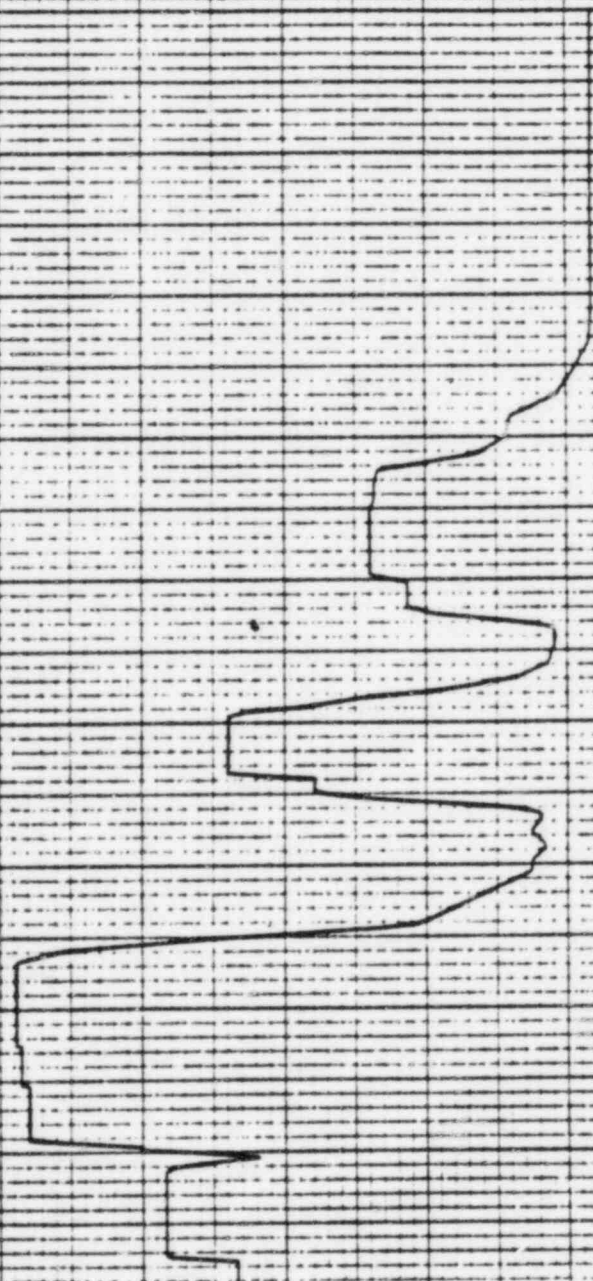
DISK CURVE SET NO.15

NOTE:

BASE OF ONE-ENVELOPE, 2V, 10V, 50VCO, CALC 8-12210-
201-1130-129-0.120-129-1.120-131-0

ACCELERATION G

FREQUENCY IN HZ



10⁰
10¹
10²
10³

697d

9 FEB 1965

K. KRY

DAMPING VALUE = 0.020

PSPECTRA VER DI LEV DB UPSET CONDITION

QULF STATES UTI LITIE5-RBS UNIT 1-CALC12210-MMIC1-50E-1903 REV11

RRS DF ACC.-REACTOR BLOC .-EL-96.000, MASS=17 SE16 MODEL-PSM-PEDESTAL

PERK SPREAD -20% .-25% SEISMIC .-15% HYDRODYNAMIC

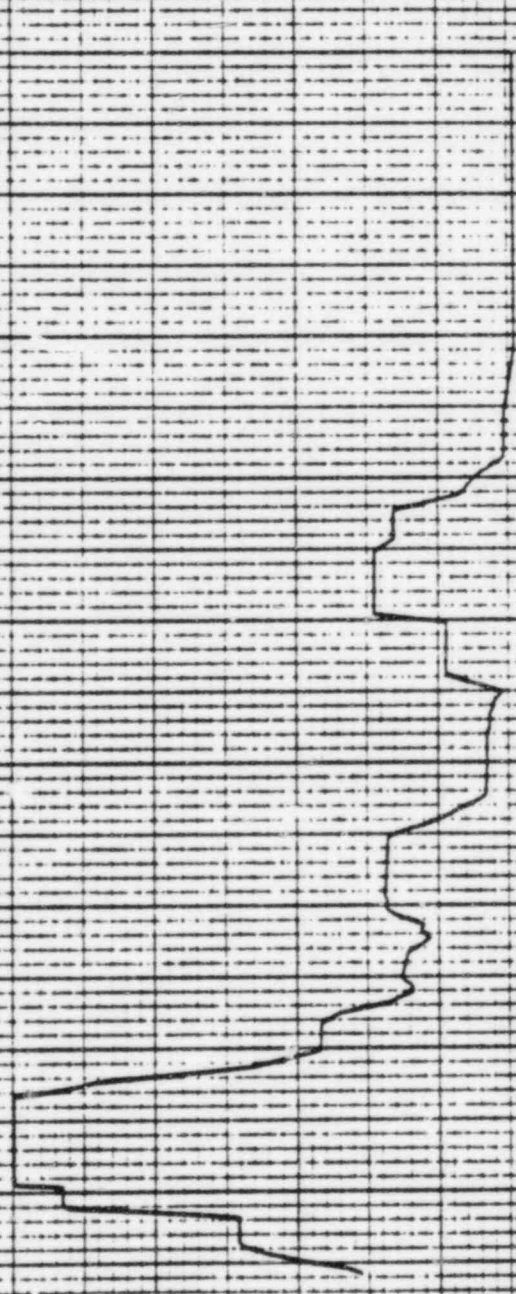
DISK CURVE SET NO. 15 VER DIRECTION

NOTE: BRAS DF ORECHVIRAVIA. 24.100 (RVC3). CALC 8-12210-

201-1300-174-0.120-129-1.120-131-01

ACCELERATION -G

0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80



FREQUENCY IN HZ

10^0 10^1 10^2 10^3 10^4

1 2 3 4 5 6 7 8 9 10

5 JUN 1985

7/6/84

JOB 1671

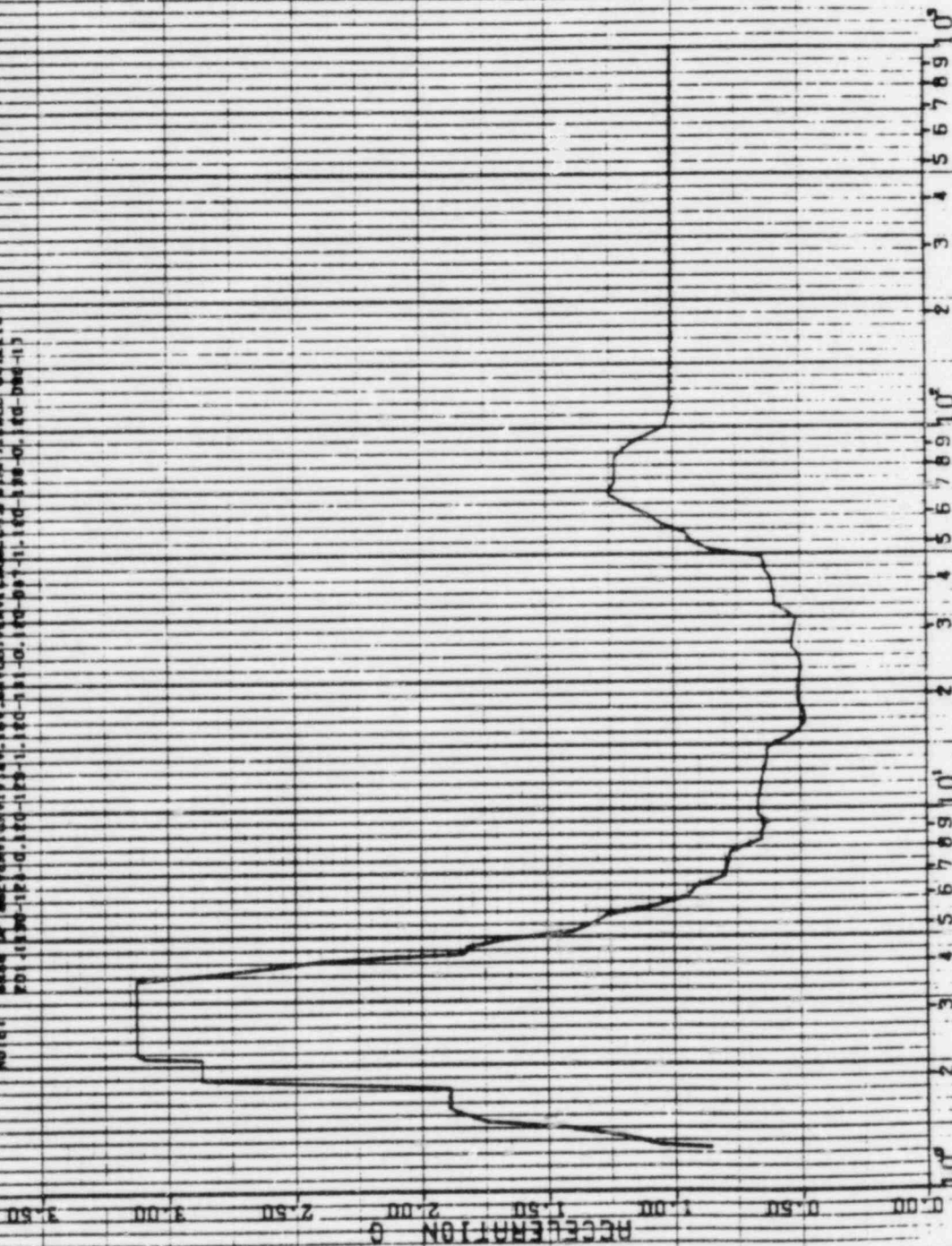
DAMPING VALUE = 0.020

SPECTRA VER DI LEV DB
 FULLY CONDITION
 GULF STATES UTILITIES-R65 UNIT 1-CALCIP210-AMICJ-5DE-1803 REV12)
 RRS OF REC.-REACTOR BLDG.-EL-85-000, MASS-17 SEIS MODEL-PSA, PEDESTAL
 PERK SPREAD-20K, 25K SEISMIC, 15% HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO. 1

NOTE: READ OF DISK CURVE SET NO. 1
 ZD 11890-124-D, 170-1129-1, 170-111-0, 170-997-11, 170-178-0, 170-200-13



248A

9 FEB 1988

K. KAY

DAMPING VALUE = 0.000

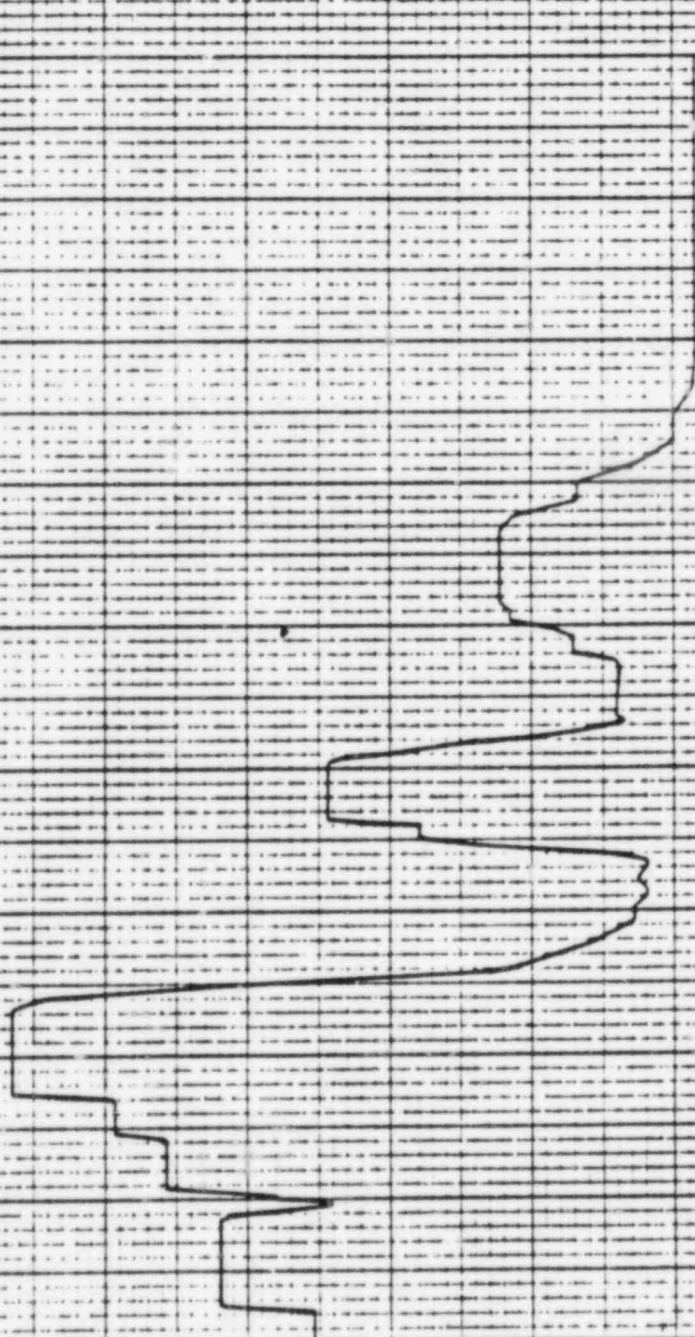
UPSET CONDITION
HOR DIRECTION

VER 01 LEV 08
DULF STATES UTILITIES-R86 UNIT 1-CALC12210-NM1C1-5DE-19D3 REV117
RFS OF ACC.-REACTOR BLDG.-LEL-101.00.MASS-18 SE16 MODEL-PSM.PEDestal
PEAK SPREAD -20%+25% SEISMIC-P-152 HYDRODYNAMIC
DISK CURVE SET NO.17

NOTE: 8865 OF 005-20V164V1V.2V.16V.8AVCO5.(ALF-6412216-791-1130-129-0.12C-122-120-131-0)

ACCELERATION G

FREQUENCY IN HZ



8449

9 FEB 1965

K. KRY

DAMPING VALUE = 0.020

PSPECTRA VER D1 LEV 08 UPSEY CONDITION

DULF STATES UTILITIES-RBS UNIT 1-CALC12210-MH C1-50E-1803 REV117

RMS OF ACC. - REACTOR BLDG., EL=101.00, MASS=18 SEIS MODEL-PSM.PEDESTAL

PEAK SPREAD = 20% ± 25% SEISMIC. - 15% HYDRODYNAMIC

DISK CURVE SET NO. 17 VER DIRECTION

NOTE: 8888 OF ONE-ENVELOPE, 2V, 10V, 20VCO1, (ALL '8-12210-

201-1100-110-0.100-100-1, 110-111-0)

ACCELERATION G

0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80

5 6 7 8 9 10

3

2

2

3

4

2

3

4

5

6

7

8

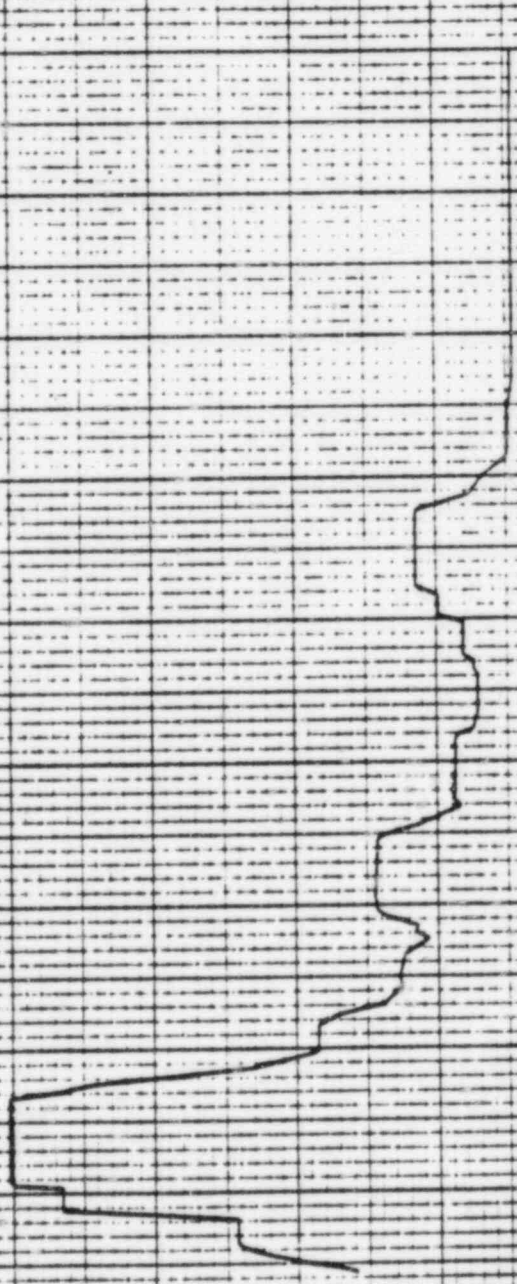
9

10

10

10

FREQUENCY IN HZ



5 JAN 1983

902A

JOB 1571

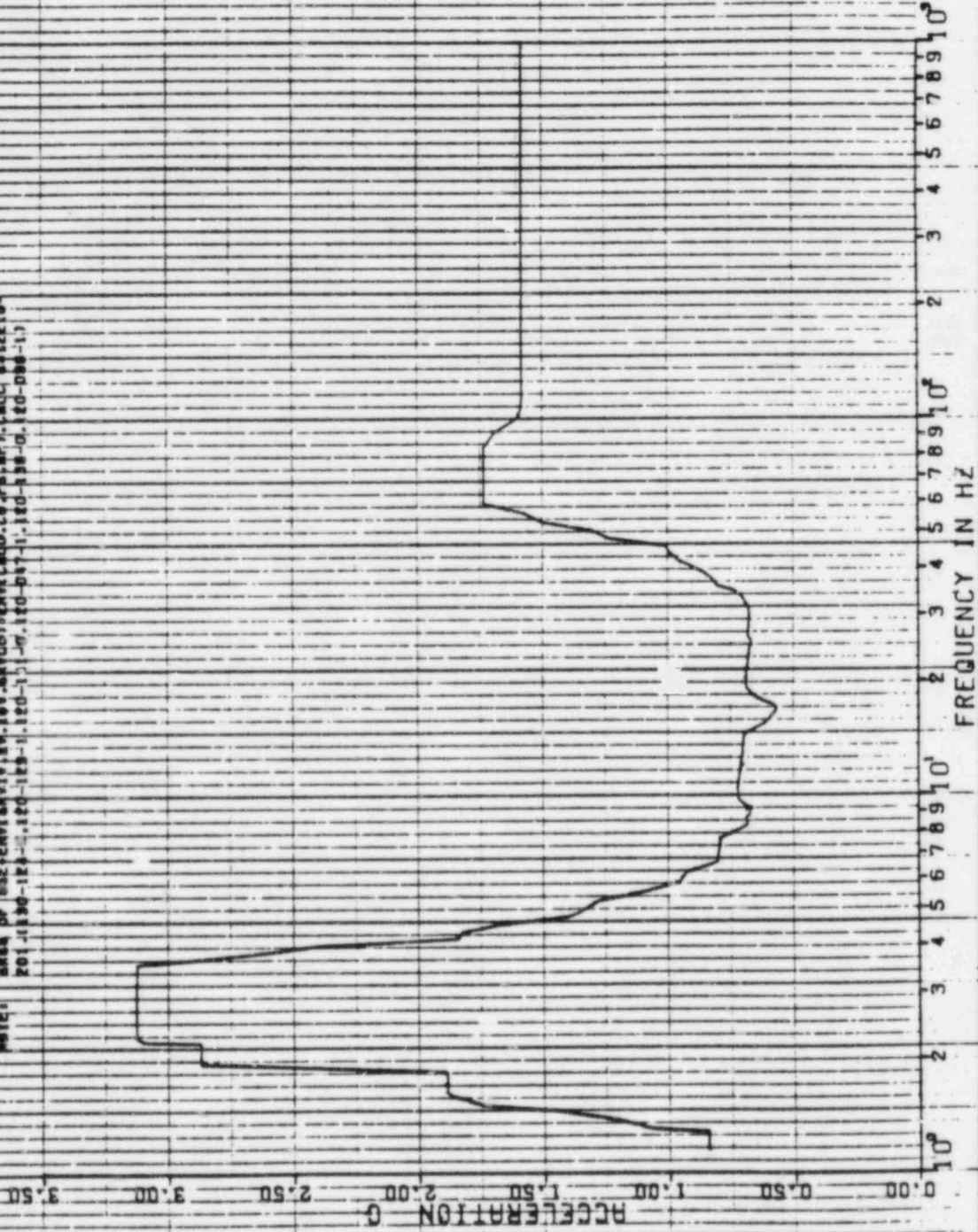
DAMPING VALUE = 0.020

PSPECTRA VER 01 LEV 08
 FRUITED CONDITION
 DUAL STARTS UTILITIES-RBS UNIT 1-CALCIP21D-NWICU-5QE-1903 REVIZ 1
 RRS OF ACC.-REACTOR BLDG..EL=101.00.WRS=18.5E16 MODEL-PSM.PEDESTAL
 PEAK SPREAD-1.20Z-25Z SEISMIC-15Z HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO.2

NOTE: AREA OF DISK CURVE SA/V1.VM.10V.SAYTDO15 (AVI CALD.C6.PS.MF).CALC'BASE16-
 201.1130-124-00.120-125-11.120-111.M.120-047-11.120-130-00.120-090-17



5 JUN 1955

JOB 22MB

PSPECTRA VER 01 LEY 09
 CALF STATES UTILITIES-RBS UNIT 1-CALCT2210-NR C1-502-1003 REV121
 RBS OF REC.-REACTOR BLDG., FL 101, 00, MASS-10 SETS MODEL-PSM, PEDESTAL
 PERK SPREAD.-201.1252, SEISMIC. 1-152, HYDRODYNAMIC
 DISK CURVE SET NO. 2

DAMPING VALUE = 0.050

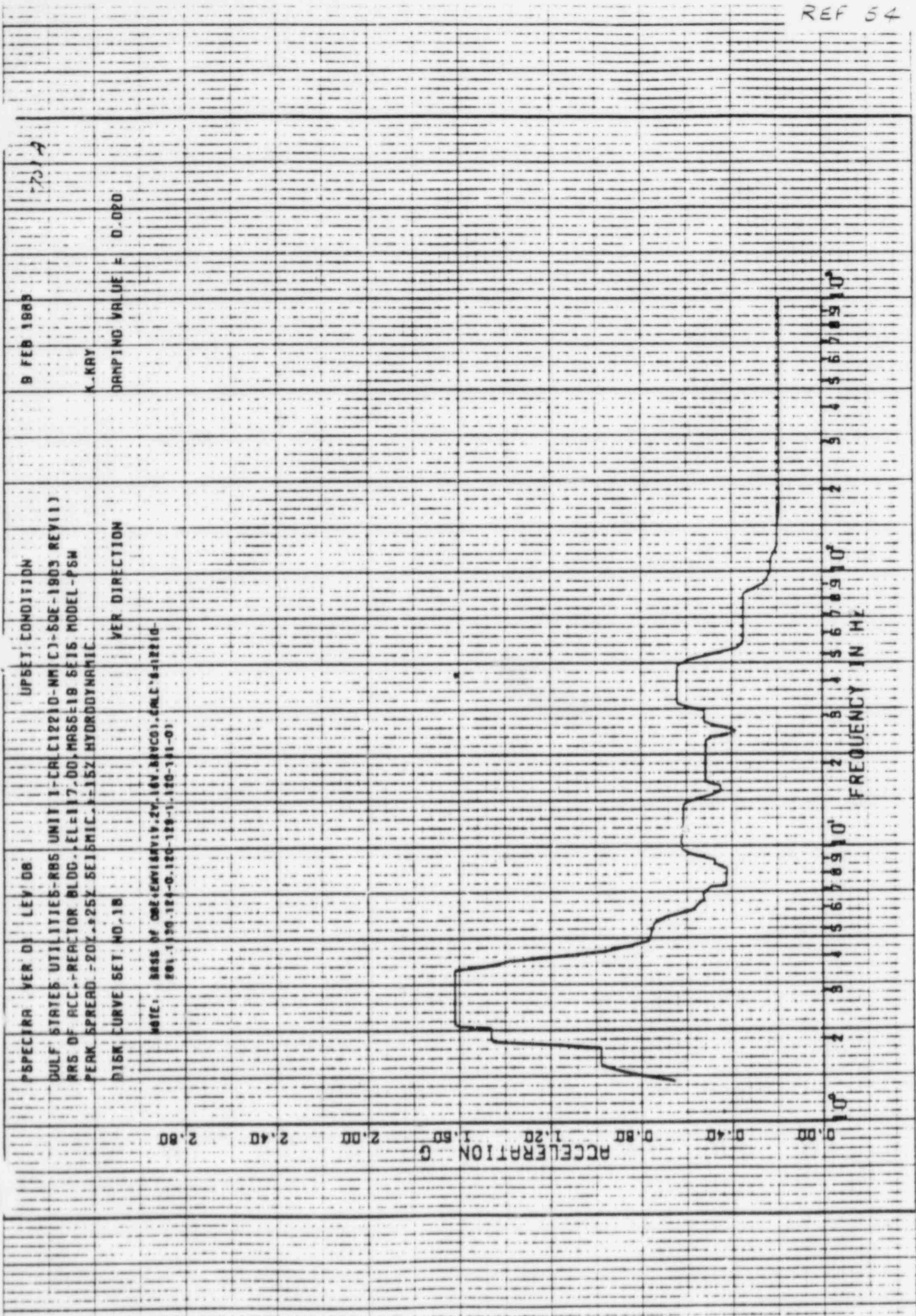
VER DIRECTION

NOTE: BASE OF 002 (001 0011) CV. 61. 80VCO3 (001) CHUD. 65. P. 107. (CALCT 6-12210-
 208-130-12-0. 100-123-1. 100-111-0. 100-017-1. 100-130-0. 100-090-3)

ACCELERATION 0 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40



FREQUENCY IN HZ 10⁰ 10^{0.5} 10¹ 10^{1.5} 10² 10^{2.5}



5 JUN 1989

6147.2

JDB 224B

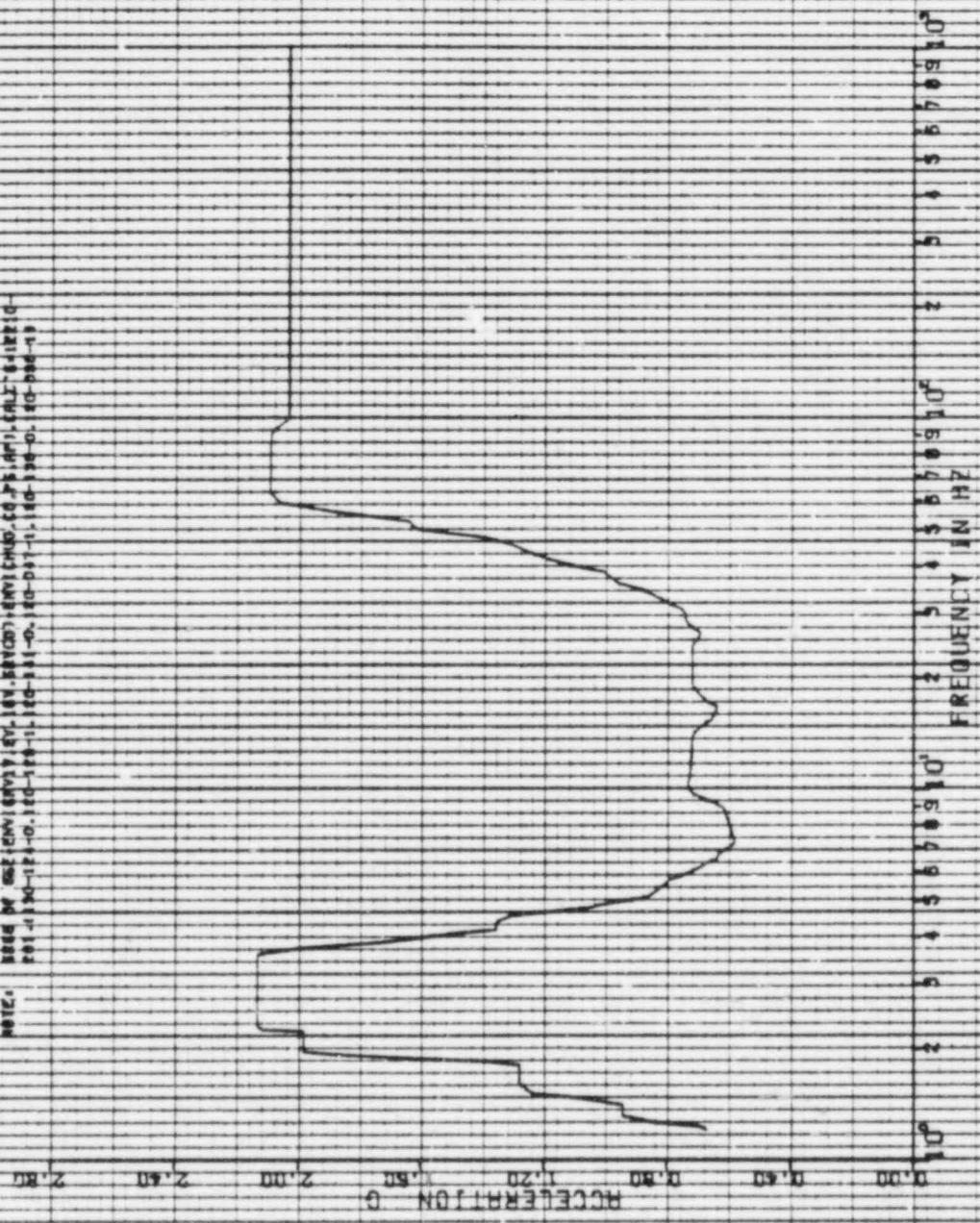
DAMPING VALUE = D.DWD

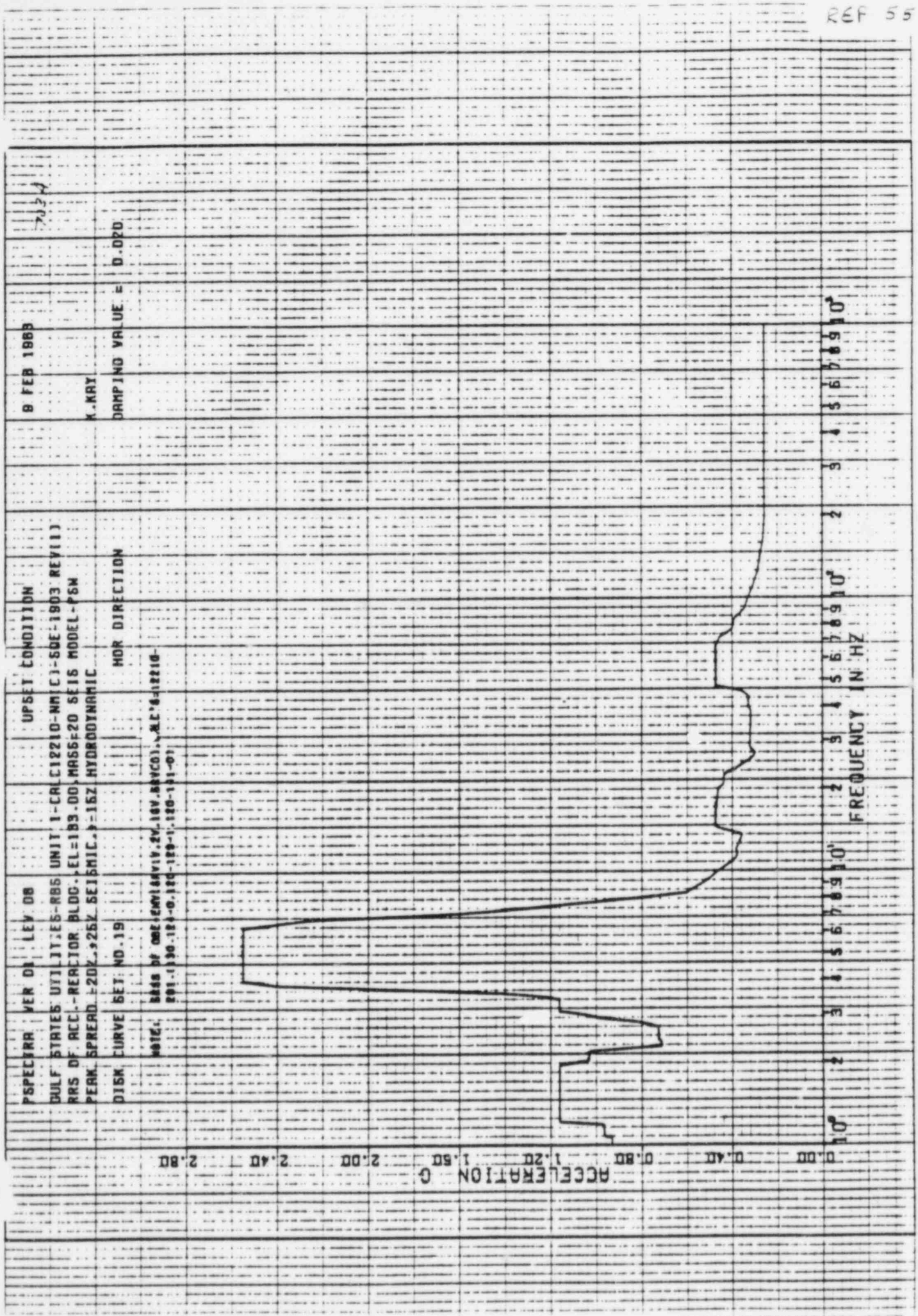
PSPECTRA VER 01 LEV 08

FRULYED CONDITION
GULF STATES UTILITIES-RBS UNIT 1-CALC12210-WA1C7-50E-1903 REV12)
RBS OF ACC. REACTOR BLDG.-EL=17.00, MASS=19.6E16 MODEL PSM
PEAK SPREAD = 20.1, 25.2 SEISMIC. 1-15Z HYDRODYNAMIC

DISK CURVE SET NO. 3 VER DIRECTION

NOTE: READ OF MSZ ENVIRONMENTAL VIBRATION LOGS (MFI, CALI, G-12210-
201-130-124-0, 100-120-1, 100-141-0, 100-047-1, 100-130-0, 100-096-1)





PSPECTRA VER 01 LEV 08

DULF STATES UTILIT.ES-R86 UNIT 1-CALC12210-NM(C)-S0E-1803 REV(1)
RRS OF ACC.-REACTOR BLDG., EL=193.00, MASS=20 SEIS MODEL-PSM
PEAK SPREAD =20V., ±25V. SEISMIC. → 15Z HYDRODYNAMIC

DISK CURVE SET NO.19

NOTE: SASS OF ONE CHANNEL (1V. 18V. S.W.V.C.), XLT'S-12210-
201.130-12-0-120-120-1.120-131-01

9 FEB 1969

K.KAY

DAMPING VALUE = 0.020

UPSET CONDITION

MOR DIRECTION

ACCELERATION

FREQUENCY IN HZ

7338
8 FEB 1989
K. KRY
DAMPING VALUE = 0.020

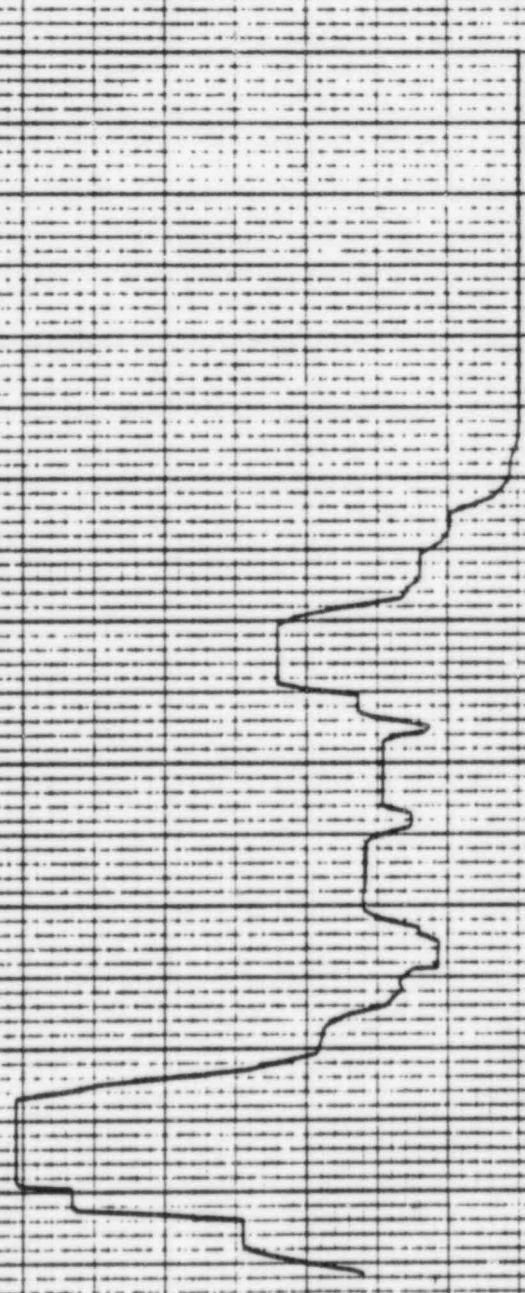
UPSET CONDITION
VER DIRECTION

PSPEC10A VER 01 LEV 08
GULF STATES UTILITIES-RBS UNIT 1-CALC1210-NM C)-S0E-1903 REV(1)
RR5 OF ACC.-REACTOR BLDG., EL=125-00, MASS=20 SEIS. MODEL -75M
PERK SPREAD -20Z, 25Z SEISMIC. -15Z HYDRODYNAMIC
DISK CURVE SET NO. 19

NOTE: RBS OF JBE,CW18A1V,2V,16V,8V(C6),CMLT,41R210-
P01-130-121-0,120-129-1,120-131-01

ACCELERATION G

FREQUENCY IN HZ



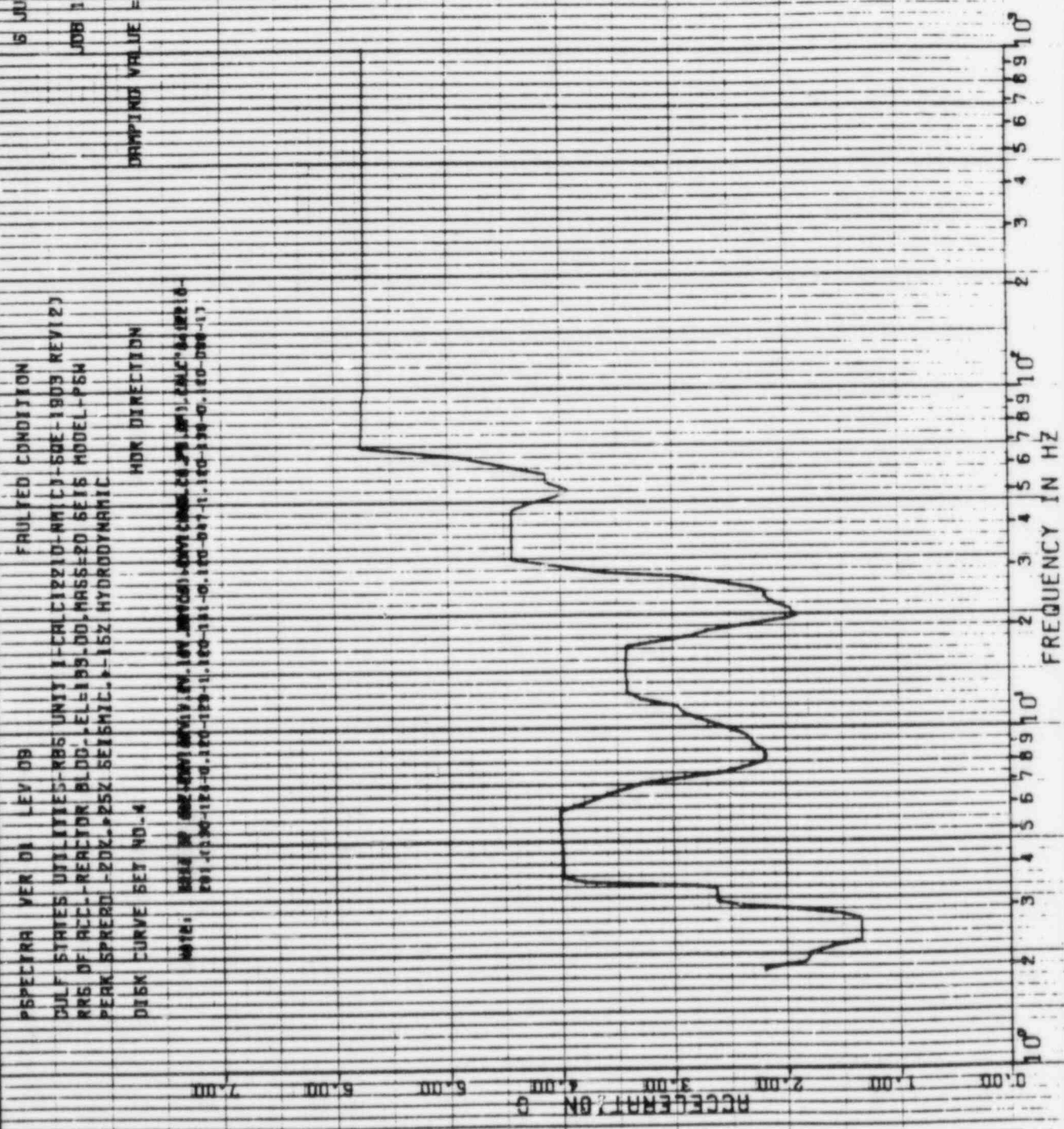
5 JUN 1988

906A

JOB 1671

DAMPING VALUE = 0.020

SPECTRA VER DI LEV DB
 FULL STATES UTILITIES-RBS UNIT 1-CALCIP210-AMICJ-SOE-1909 REV12J
 RRS OF ACC-REACTOR BLDG-LE-199-00, MASS=20 SETS MODEL-PSM
 PEAK SPREAD -ZDK->25% SEISMIC--15Z HYDRODYNAMIC
 DISK CURVE SET NO. 4
 DIR: DATA TO DISK UNIT 19.10V, 19.10V, 19.10V, 19.10V, 19.10V, 19.10V, 19.10V, 19.10V, 19.10V, 19.10V
 FOR: 19.10V-19.10V, 19.10V-19.10V, 19.10V-19.10V, 19.10V-19.10V, 19.10V-19.10V, 19.10V-19.10V, 19.10V-19.10V, 19.10V-19.10V, 19.10V-19.10V, 19.10V-19.10V



7-25A

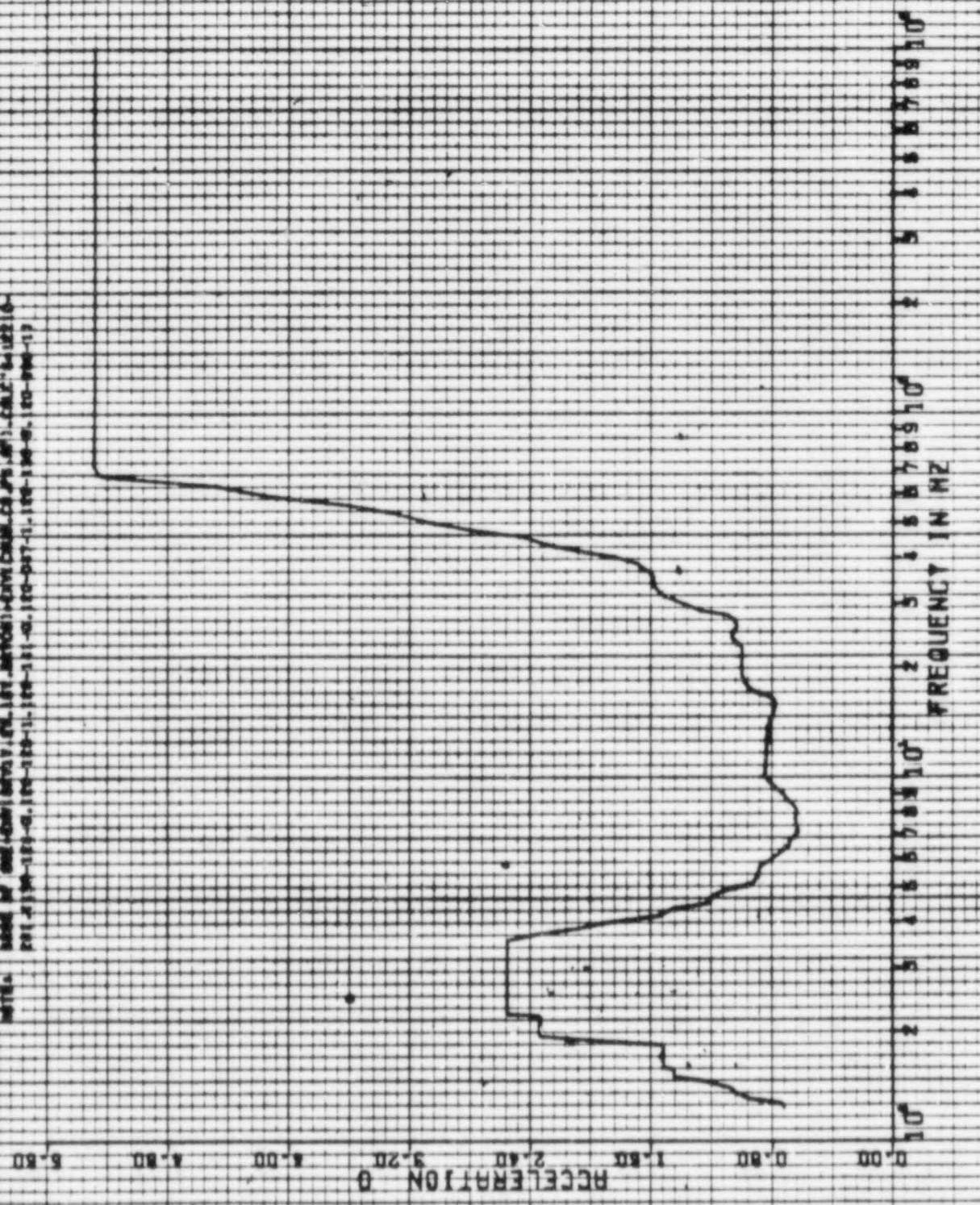
18 JAN 1965

JOHN KEENE

SHIPPING VALUE = 0.00

PSPECTRA VER 01 LEV 09
 CONDITON
 DULF STATES UTILITIES-RBS UNIT 1-CALCUTTO-MNCD-5DE-1903 REVISE
 RRS OF ACC.-REACTOR BLDG.-EL-135-00-NR55-20 6216 MODEL-PSM
 PEAK SPREAD -EOL-25Z SEISMIC-1-15Z HYDRODYNAMIC
 DISK CURVE SET NO.4
 WEX DIRECTION

NOTE: 1. 100-100-0, 100-100-1, 100-100-2, 100-100-3, 100-100-4, 100-100-5, 100-100-6, 100-100-7, 100-100-8, 100-100-9, 100-100-10, 100-100-11, 100-100-12, 100-100-13, 100-100-14, 100-100-15, 100-100-16, 100-100-17, 100-100-18, 100-100-19, 100-100-20, 100-100-21, 100-100-22, 100-100-23, 100-100-24, 100-100-25, 100-100-26, 100-100-27, 100-100-28, 100-100-29, 100-100-30, 100-100-31, 100-100-32, 100-100-33, 100-100-34, 100-100-35, 100-100-36, 100-100-37, 100-100-38, 100-100-39, 100-100-40, 100-100-41, 100-100-42, 100-100-43, 100-100-44, 100-100-45, 100-100-46, 100-100-47, 100-100-48, 100-100-49, 100-100-50, 100-100-51, 100-100-52, 100-100-53, 100-100-54, 100-100-55, 100-100-56, 100-100-57, 100-100-58, 100-100-59, 100-100-60, 100-100-61, 100-100-62, 100-100-63, 100-100-64, 100-100-65, 100-100-66, 100-100-67, 100-100-68, 100-100-69, 100-100-70, 100-100-71, 100-100-72, 100-100-73, 100-100-74, 100-100-75, 100-100-76, 100-100-77, 100-100-78, 100-100-79, 100-100-80, 100-100-81, 100-100-82, 100-100-83, 100-100-84, 100-100-85, 100-100-86, 100-100-87, 100-100-88, 100-100-89, 100-100-90, 100-100-91, 100-100-92, 100-100-93, 100-100-94, 100-100-95, 100-100-96, 100-100-97, 100-100-98, 100-100-99, 100-100-100



3-14

9 FEB 1983

K. MAY

DAMPING VALUE = 0.020

UPSET CONDITION

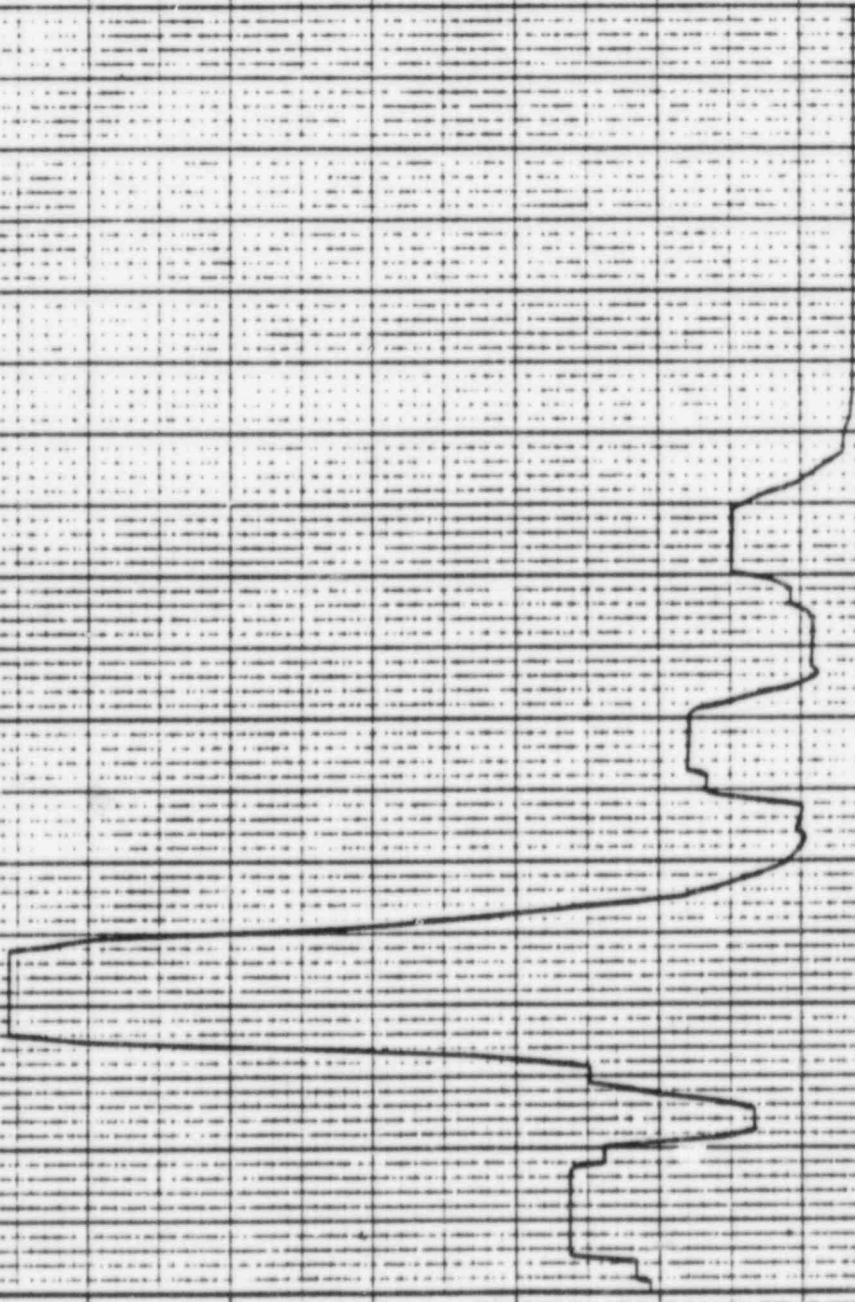
DULF STATES UTILITIES-RBS UNIT 1-CALC12210-WM C1-SQE-1903 REV113
RPG OF ACC. REACTOR BLDG. EL=147.00, MASS=21.5E15 MODEL-PSM
PEAK SPREAD -20% SEISMIC. 1-15Z HYDRODYNAMIC

HOR DIRECTION

BASE OF ONE (WIND) 17.2V-18V. (WIND) 1.0M.T.S-12210-
POT. 1.30. 1P. -0.120-129-1.120-111-0)

PSPECTRA VER 01 LEV 08

DISK CURVE SET NO. 20



10
0
0.50
1.00
1.50
2.00
2.50
3.00
3.50

0
2
4
6
8
10

FREQUENCY IN HZ

PSPECTRA VER 01 LEV 08

UPSET CONDITION

8 FEB 1985

754

GULF STATES UTILITIES-RBS UNIT 1-CALC(12210-NM(C)-SDE-1903 REV11)

RRS OF ACC.-REACTOR BLDG. EL=147.00, MASS=21 SEIS MODEL-PSM

PEAK SPREAD -20% +25% SEISMIC, -15% HYDRODYNAMIC

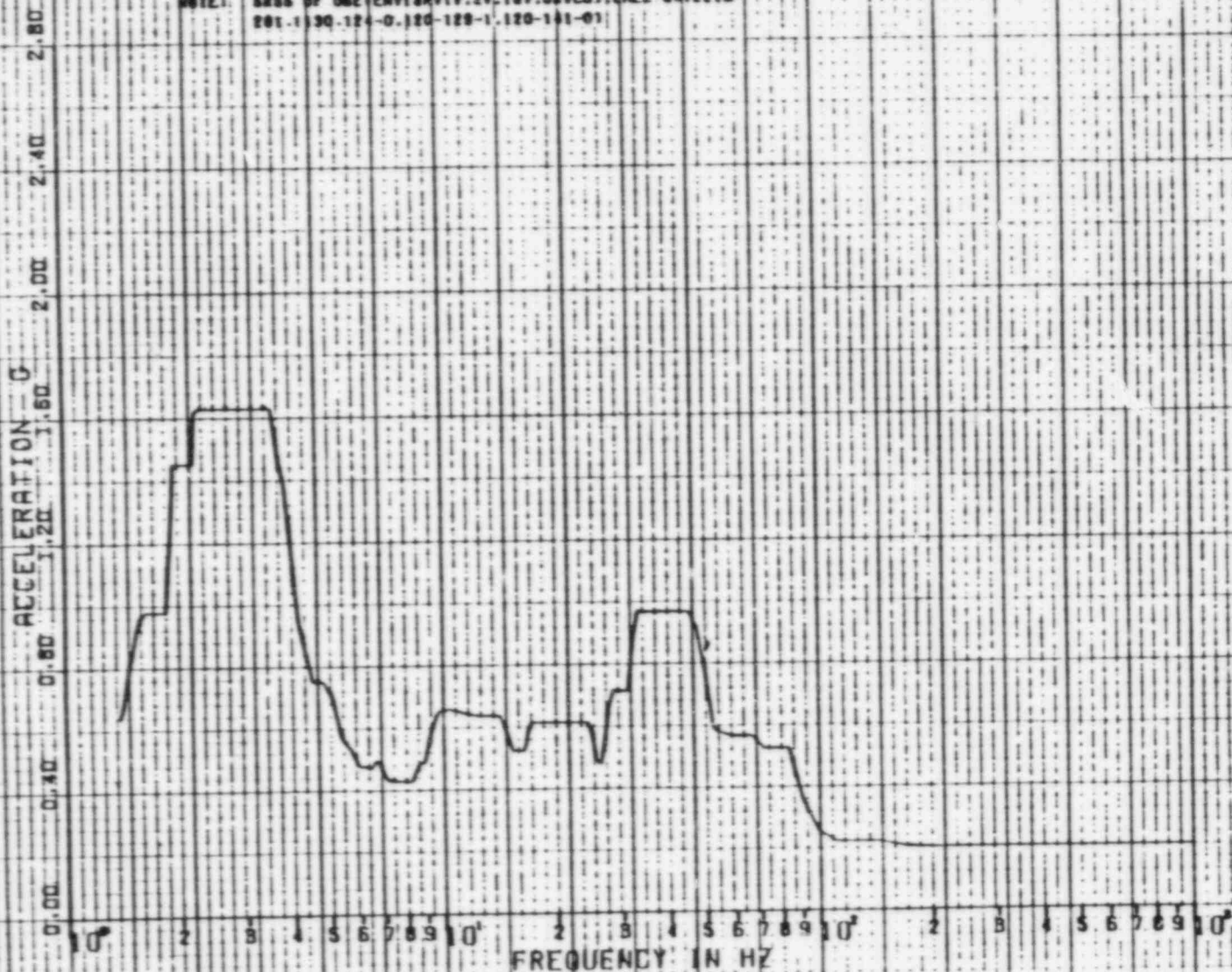
K.KAY

DISK CURVE SET NO.20

VER DIRECTION

DAMPING VALUE = 0.020

NOTE: BASE OF ONE (ENVISERV 2V 14V 50VCO) CALC'D-12210-201-1130-124-0-120-128-1-120-141-01



REF 56

5 JUN 1968
JOB 1571
907A

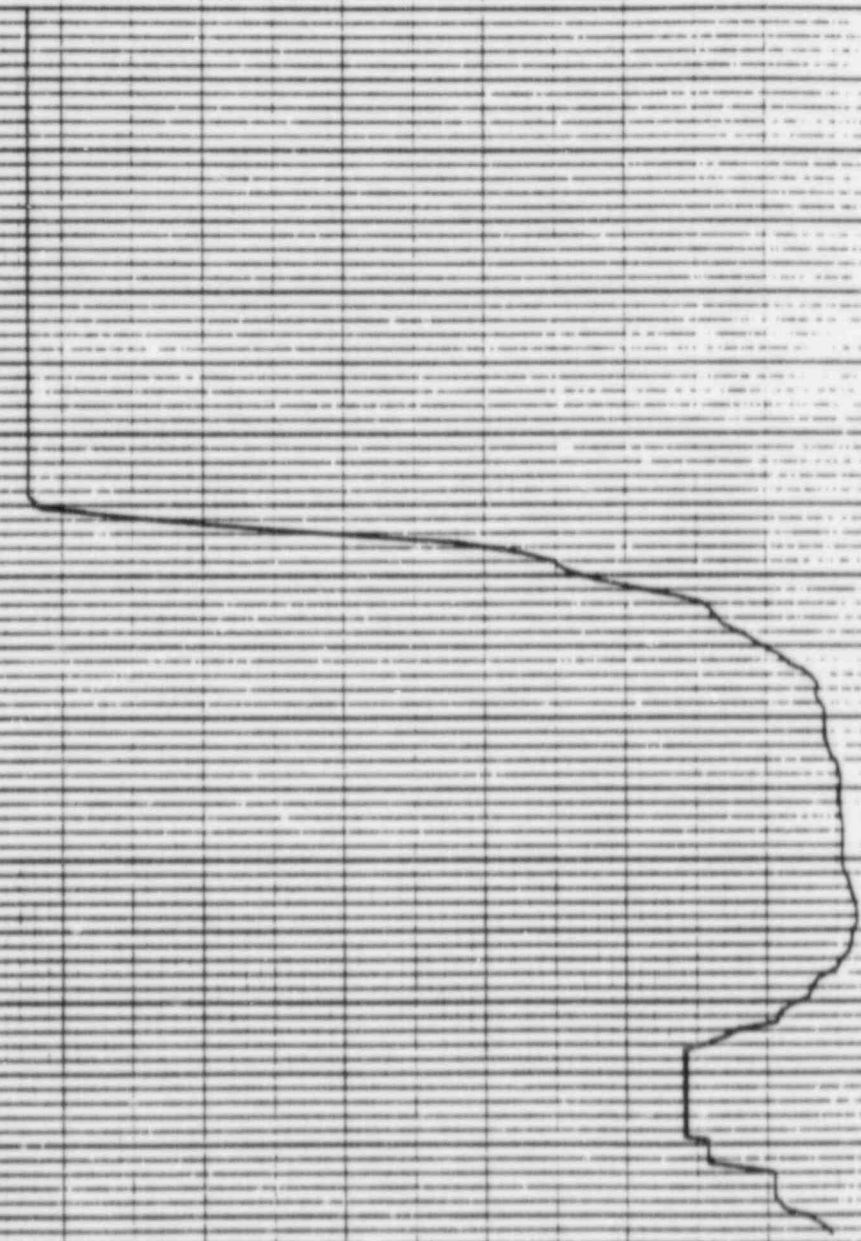
PSPECTRA VER DI LEV DB
DULF STRYTES UNL VYTES-RBS UNIT 1-CALC(12210-MVIC)-SDE-1903-REV(2)
RBS DF RCL-REACTOR
PERK SPRED. -RDL-25K SEISMIC. -15K HYDRODYNAMIC
DISK CURVE SET NO. 5
VER DIRECTION

DAMPING VALUE = 0.020

DATA
RSL 1130-124-0.170-129-L. 100-341-0.100-947-1.100-130-0.100-200-17

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
10² 2 3 4 5 6 7 8 9 10³
10³ 2 3 4 5 6 7 8 9 10⁴

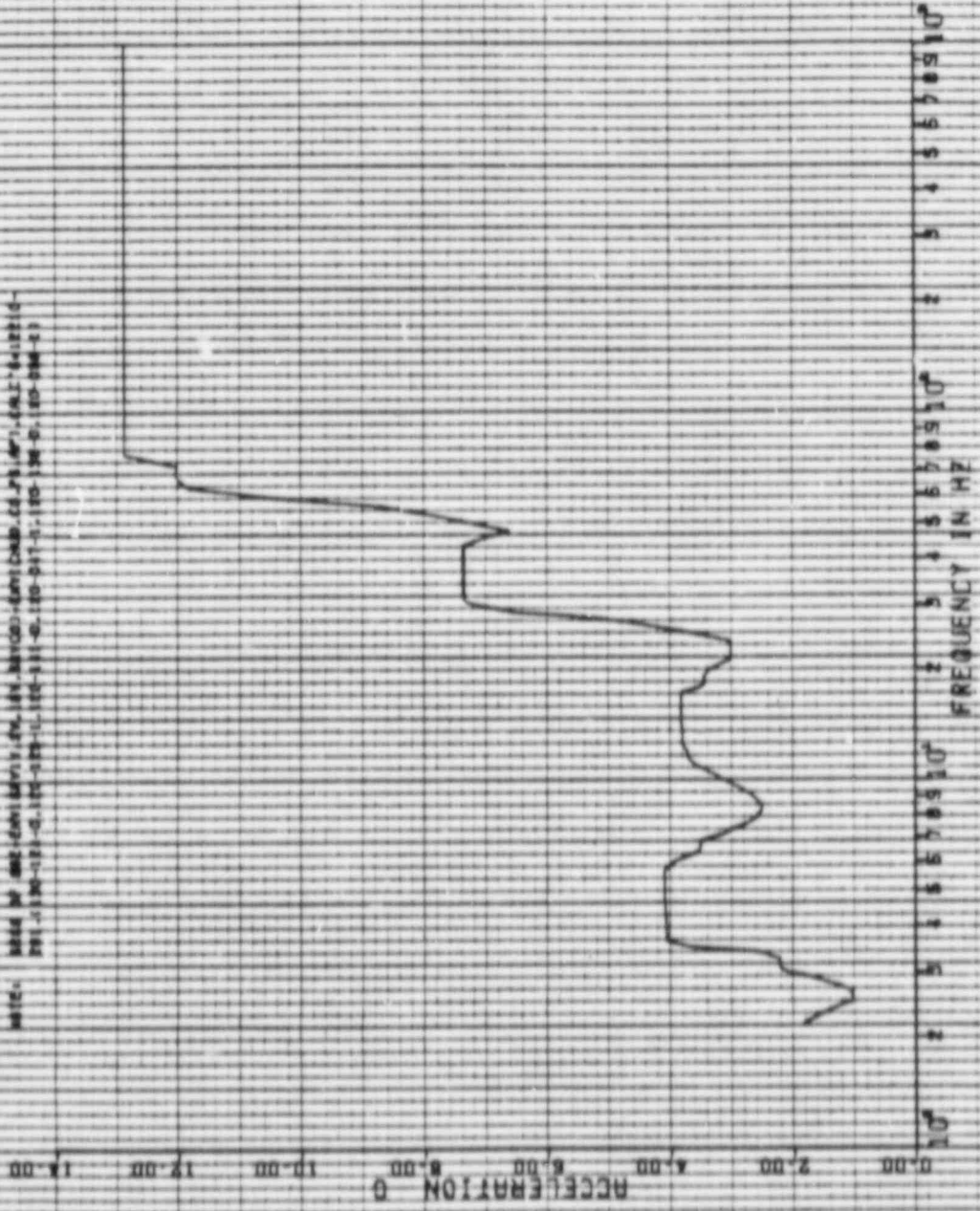


5 JUN 1969 171A

JOB 2236

SPECTRA VER D1 LEV 08
 FRULTED CONDITION
 DULF STRTES UTILITIES-RBS UNIT 1-CR12210-NR1 C1-50E-1003 REV123
 RMS DF ACC-REACTOR BLDG-EL-107-00, MASS: 21 5E16 NOCEL-PCM
 PERK SPNRD-20K, 25% SEISMIC, 15% HYDRODYNAMIC
 DISK CURVE SET NO. 5
 NON DIRECTION
 DAMPING VALUE = 0.050

NOTE: MASS OF UNIT=2000000 LB, STIFFNESS=1000000000 LB/IN, DAMPING=100000000 LB/IN, PERIOD=0.00157 SEC, FREQUENCY=632.34 HZ, DISK CURVE SET NO. 5
 PERIOD=0.00157 SEC, FREQUENCY=632.34 HZ, DISK CURVE SET NO. 5

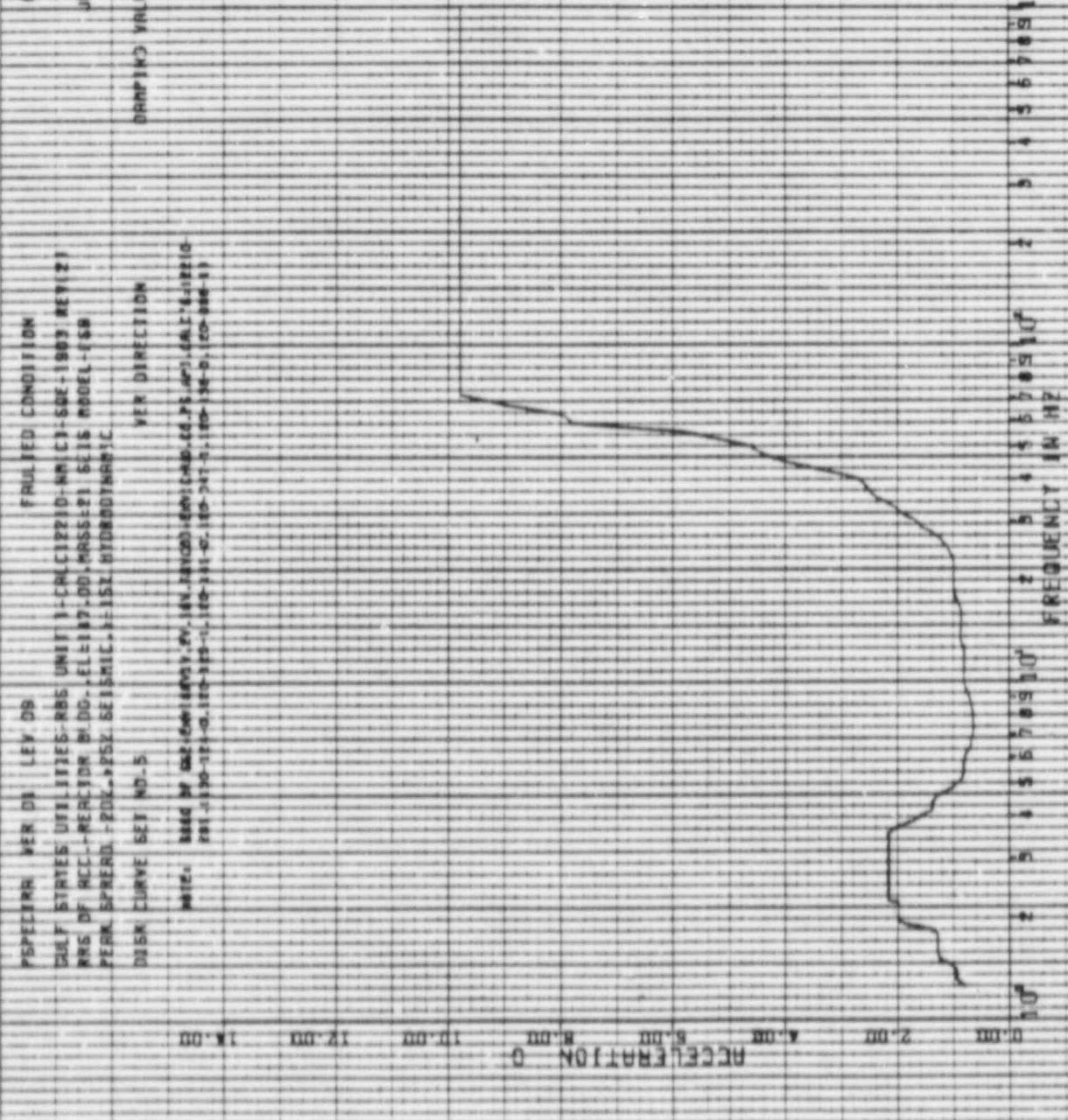


5 JUN 1969
JOB 2248
10.45A

FRUITED CONDITION
DAILY STATES UTILITIES-RBS UNIT 1-CALCULATED-NR(C)-SOL-1969 REV(1)
RMS OF ACC-REACTOR BLDG., EL-147-00, MASSIERI GEIS MODEL-168
PERK. SPHERD. -PDK-475X. GEISMIC. 1-15X. HYDRODYNAMIC.
DISK CURVE SET NO. 5
VER DIRECTION

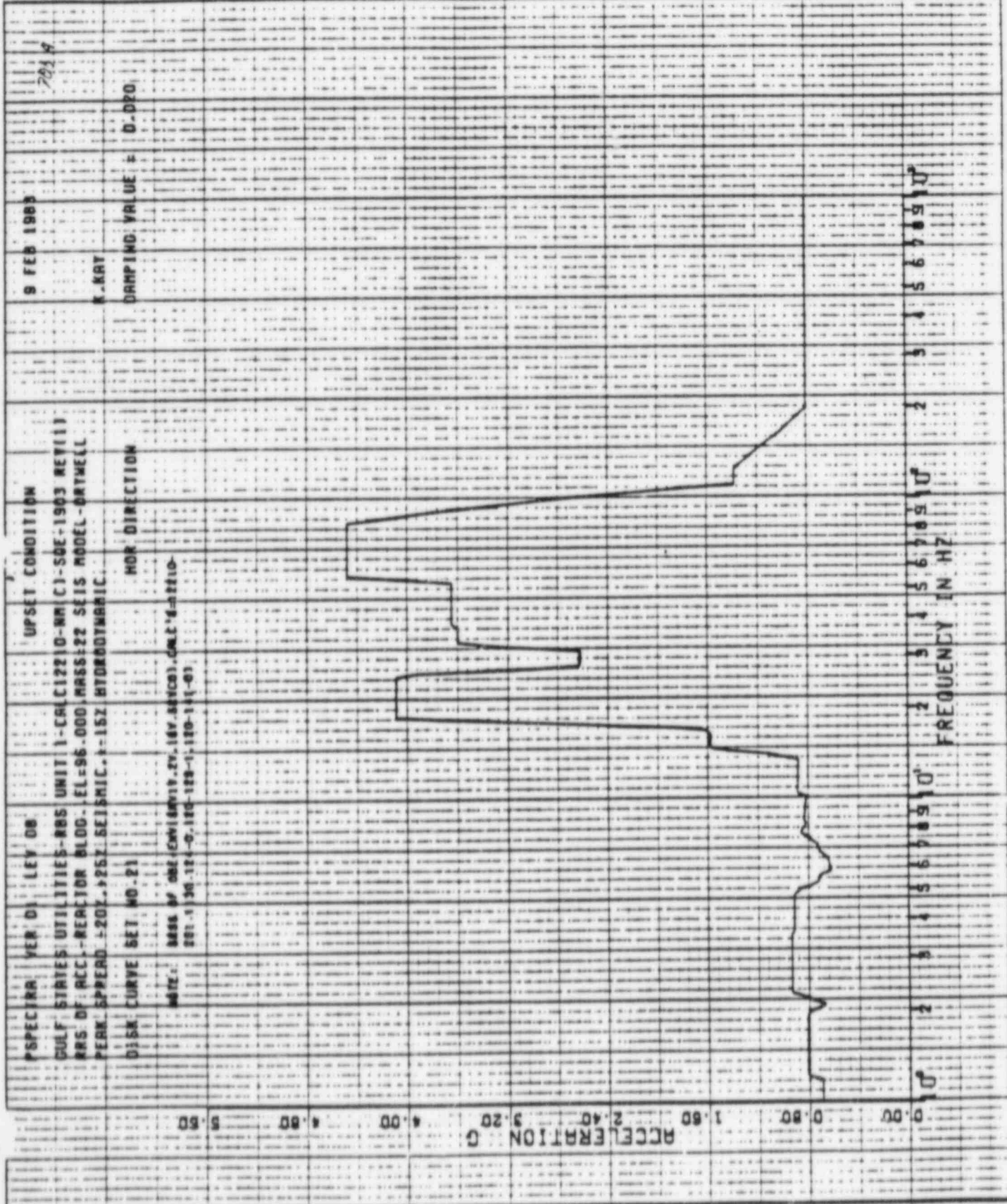
DAMPING VALUE = 0.040

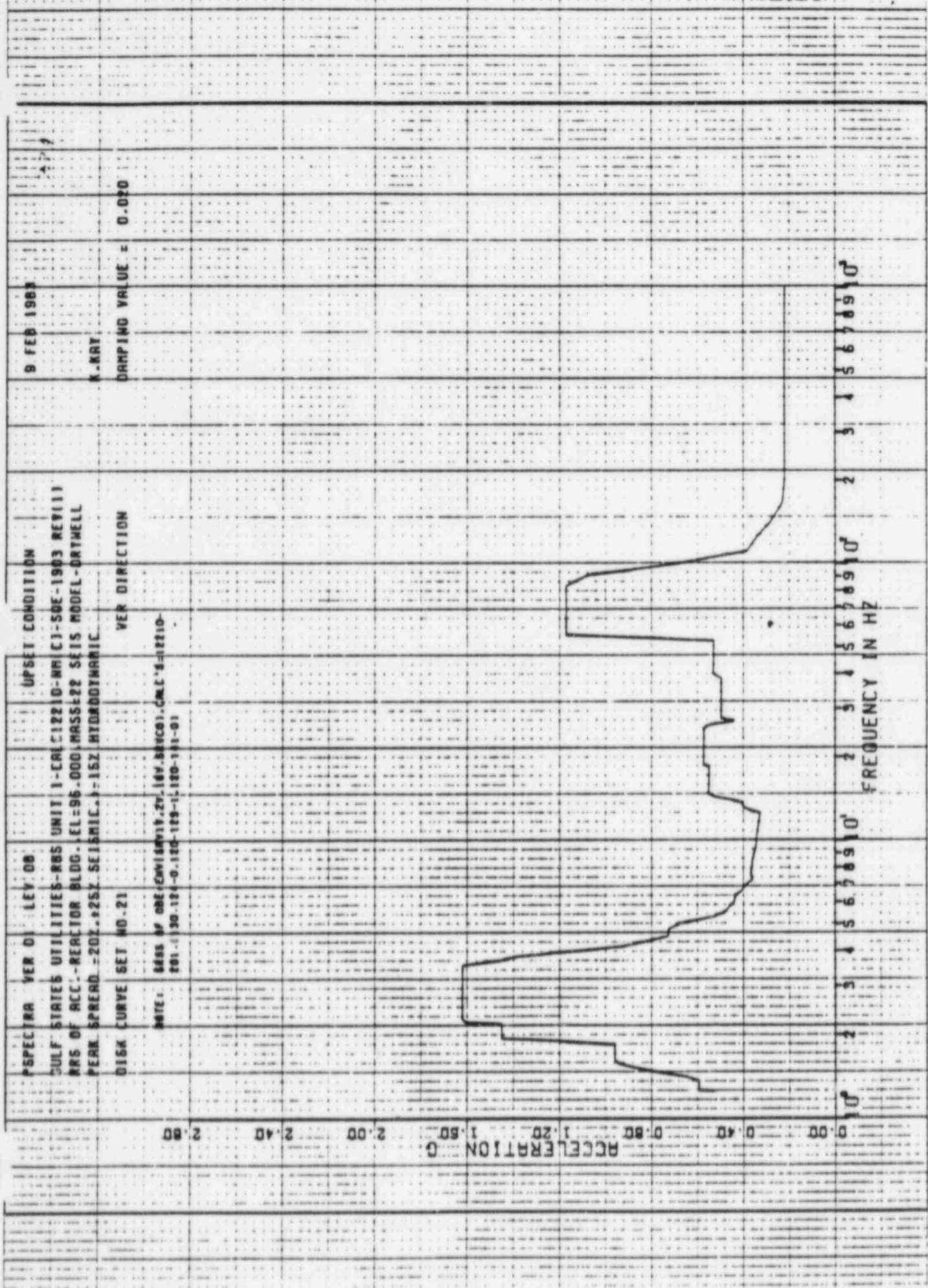
Note: based on data from 10/10/68. See also 10/10/68. See also 10/10/68. See also 10/10/68.



ACCELERATION

FREQUENCY IN HZ





UPSET CONDITION

SULF STATES UTILITIES-RBS UNIT 1-CAL C12210-WH C1-50E-1903 REV111
 MRS OF ACC.-REACTOR BLDG.-EL-96-000, MASS-E22 SETS MODEL-DRYWELL
 PERK SPREAD -202-R257 SEISMIC-1-15Z HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO. 21
 MASS OF OBE-COVSIRV19.2V-16V-NHCO1-CAL-E-12210-
 201-130-124-0-120-129-1-120-111-01

9 FEB 1969

M. KRY

DAMPING VALUE = 0.020

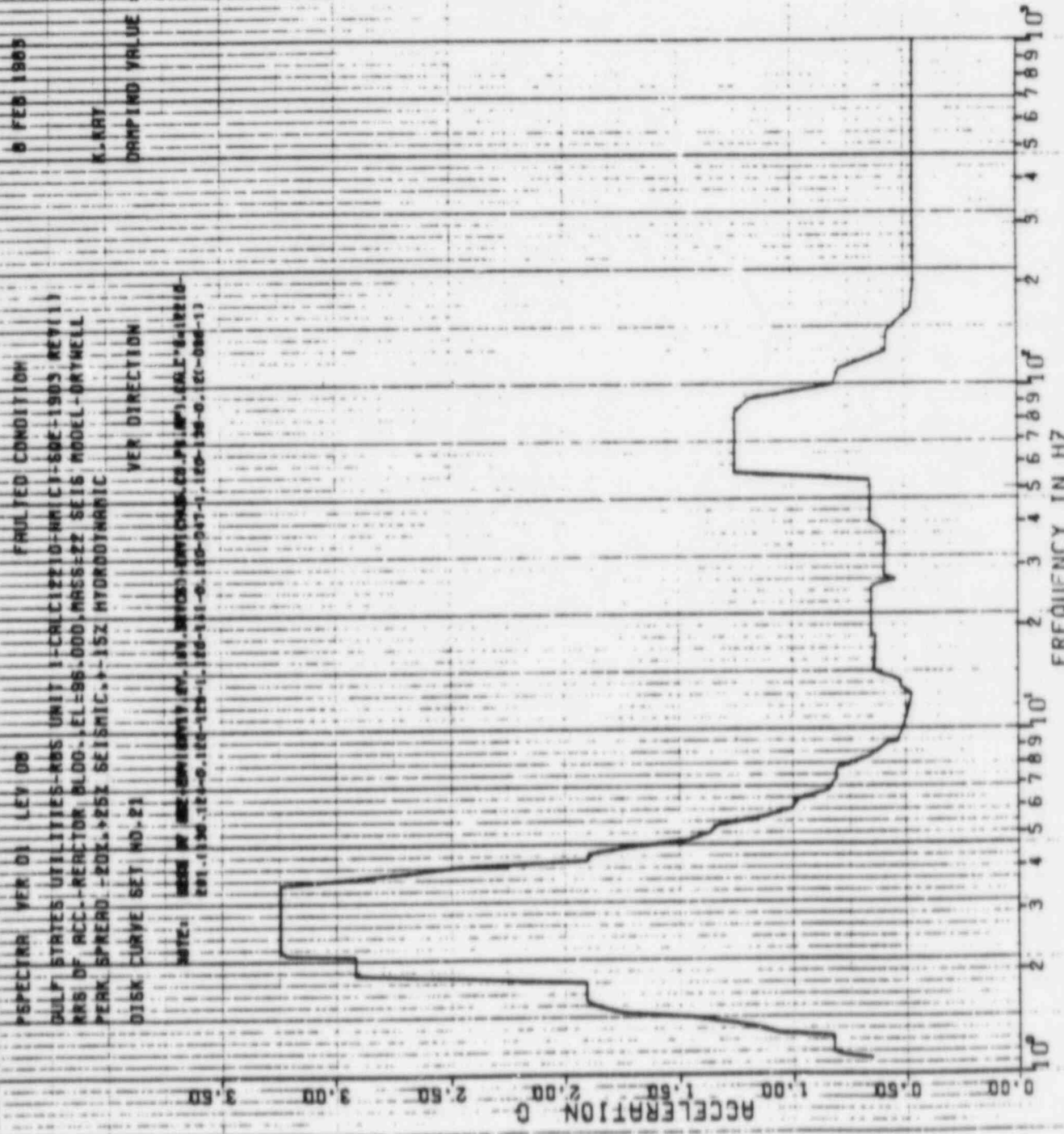
FREQUENCY IN HZ

ACCELERATION

9/1/73
8 FEB 1965

K. RAY
DAMPING VALUE = 0.020

PEPECTRA VER D1 LEV DB
 DULF STATES UTILITIES-RBS UNIT 1-CALC12210-FRAC1-SOE-1963 KEY11
 RBS1 OF RCC-REACTOR, BLDG., EL=96.000, MASS=22 SEIS MODEL-DRYWELL
 PERK SPERD.-20X.+25% SEISMIC.+15% HYDRODYNAMIC
 DISK CURVE SET NO. P1
 VER DIRECTION
 NOTE: MOD BY JMC-08/10/73, DV. 10V. METRIC UNIT CHECKED, 79.1MP, GALT, 8412210-
 221.136, 121-0.122-123-1.122-131-0.122-247-1.122-136-0.122-022-13



17 FEB 72

9 FEB 1968

SPECTRA VER DI LEV 08
 FRUITED CONDITION
 GULF STATES UTILITIES-RBS UNIT 1-CMCLIP210-WR(C)-50E-1963 REY(1)
 RMS OF ACC-REACTOR BLDG.-EL-96-000 MASS-22 SE16 MOEL-BRWELL
 PEAK SPREAD -20% PEAK SEISMIC--152 BTDBD7MBB.C.
 DISK CURVE SET NO-21
 HON DIRECTION

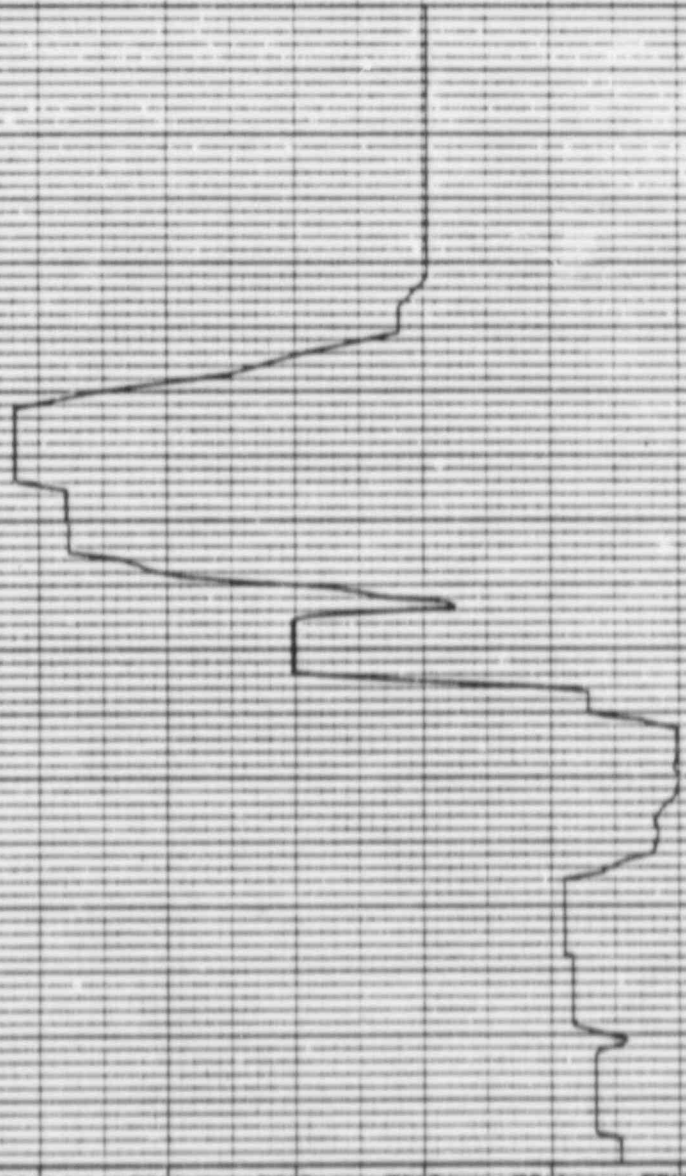
K. RRY

DAMPING VALUE = 0.050

MISC: MASS OF REC-CONVERTER, 14,000,000 LB. (MPC) 14,000,000 LB. (MPC) 14,000,000 LB. (MPC) 14,000,000 LB. (MPC)
 14,000,000 LB. (MPC) 14,000,000 LB. (MPC) 14,000,000 LB. (MPC) 14,000,000 LB. (MPC)

ACCELERATION 0 1.00 2.00 3.00 4.00 5.00

FREQUENCY IN HZ 10 20 30 40 50 60 70 80 90 100



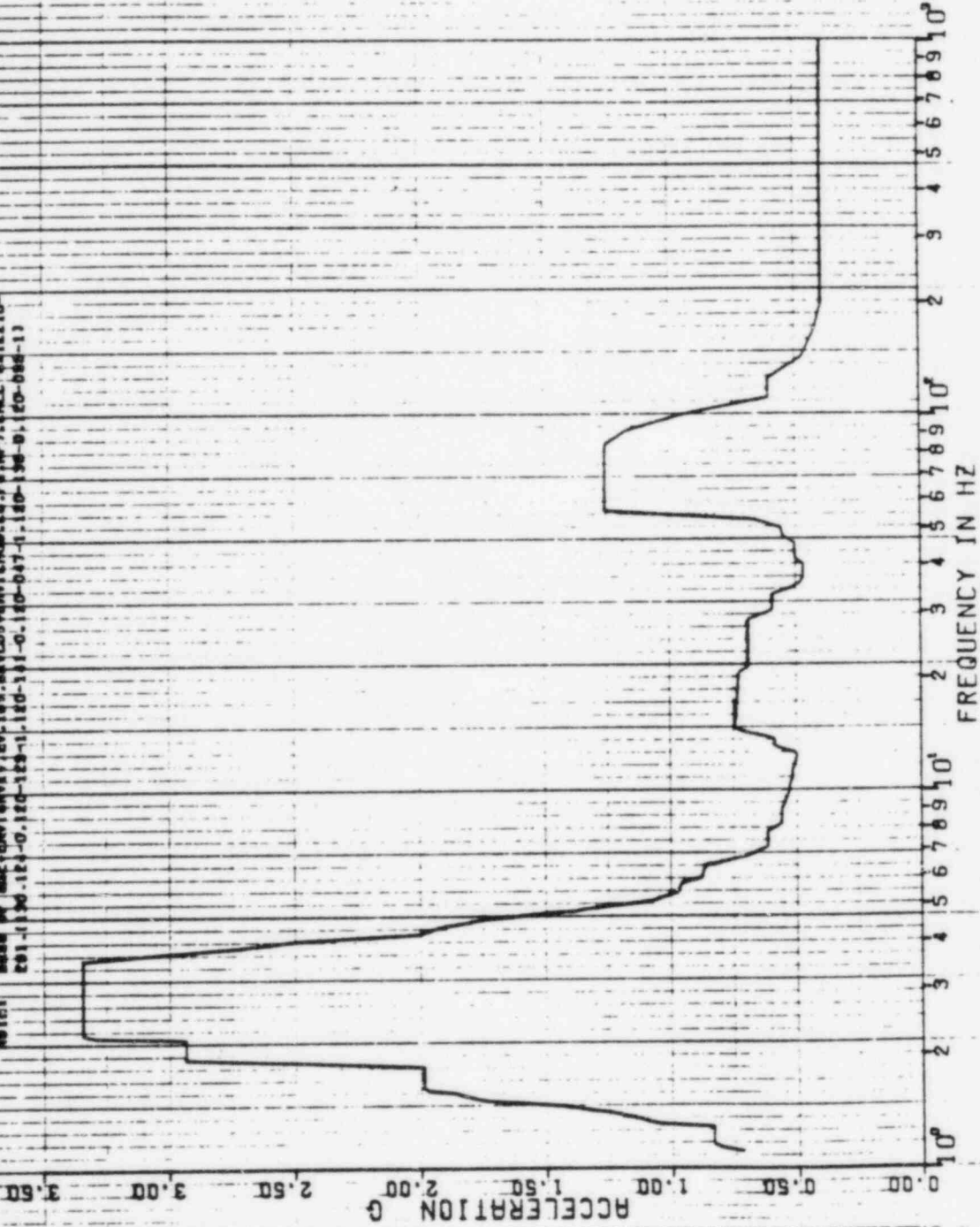
9/3/70

8 FEB 1963

K. KRY

DAMPING VALUE = 0.020

PEPECTRA VER DI LEV OB
 GULF STATES UTILITIES-RDS UNIT 1-CR1C12210-NR1C1-5DE-1903 REV11)
 NRS OF ACC--REACTOR BLDG., EL=111.00, MASS=29 SEIS MODEL-DRYWELL
 PERK SPERD -2DL, +25Z SEISMIC. --15Z HYDRODYNAMIC
 DISK CURVE SET NO. 22
 FRULTED CONDITION
 VER DIRECTION
 NOTE: MASS BY 100Z-DW10R1V1, EV. 10V. SEVCS3-SW1CNB100.78 (M), (M) L'6-12Z10-
 231-1130-121-0.120-123-1.120-111-0.120-047-1.120-130-0.120-082-11)

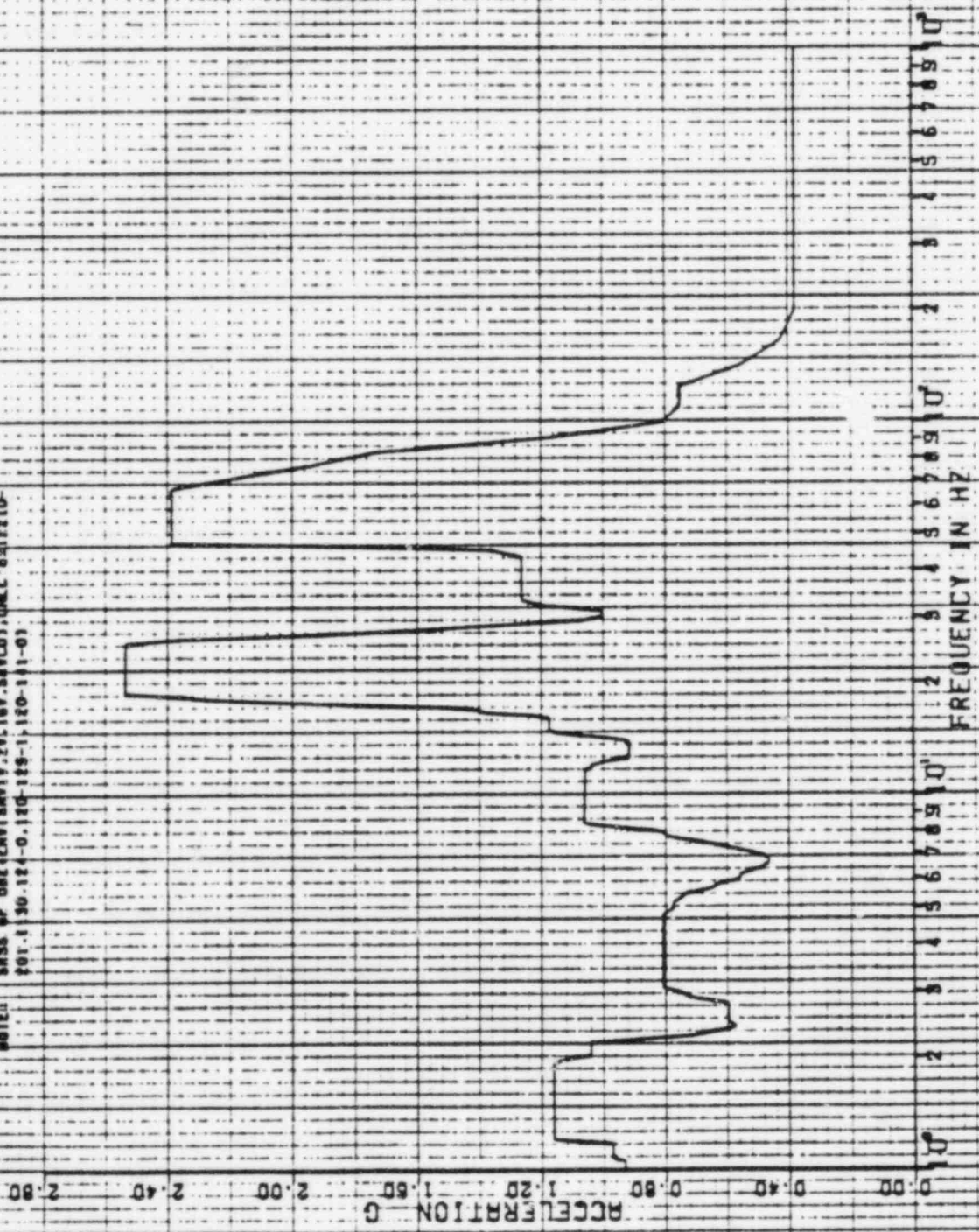


9 FEB 1963
 K. RAY
 DAMPING VALUE = 0.020

UPSET CONDITION
 HOK DIRECTION

PSPECIAR VER 01 LEV 08
 DULF STATES UTILITIES-RBS UNIT 1-CALC12210-NM C1-SOE-1903 REV 11
 RRS OF ACC.-REACTOR BLDG., EL=129.00, MASS=24 SEIS MODEL-DATWELL
 PEAK SPREAD =20Z.+25Z. SEISMIC. -15Z. HYDRODYNAMIC.
 DISK CURVE SET NO. 23

NOTE: MASS OF OBS (CIVIL) 19.2V.16V.88VCO). QMLT'. 6.11E10-
 201.130.124-0.120-119-1.120-111-0)



0 0.40 0.80 1.20 1.60 2.00 2.40 2.80
 0 2 4 6 8 10
 FREQUENCY IN HZ

0.00

7/14

9 FEB 1963

K. KAY

DAMPING VALUE = 0.020

SPECTRA VER 01 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NMCI-SOE-1903 REV111
 RMS OF ACC.-REACTOR BLOC. EL=133.00 MASS=24 SEIS MODEL-DRYWELL
 PEAK SPREAD.-20%+25% SEISMIC.-15% ROTODYNAMIC
 DISC. CURVE SET NO.23
 VER DIRECTION

NOTE: MASS OF 006-DIV(00VIV.2V,18V,6AVCB), OALC '6-12210-
 901.130.124-0.120-129-1.120-11-0)

ACCELERATION G

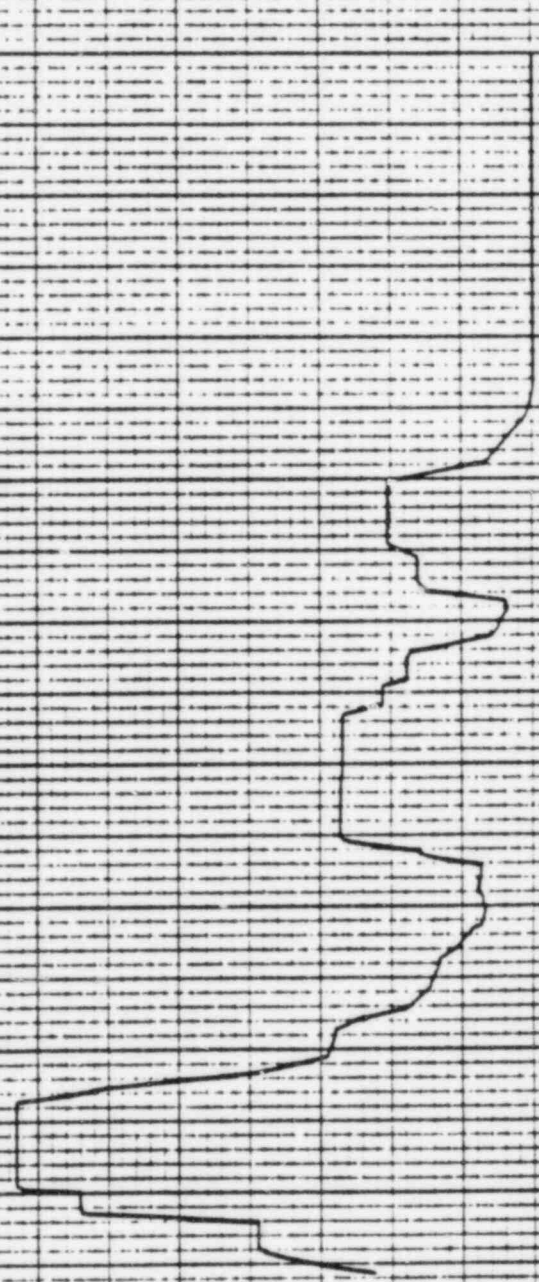
FREQUENCY IN HZ

5678910

2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10

10



914A

8 FEB 1965

K.KRY

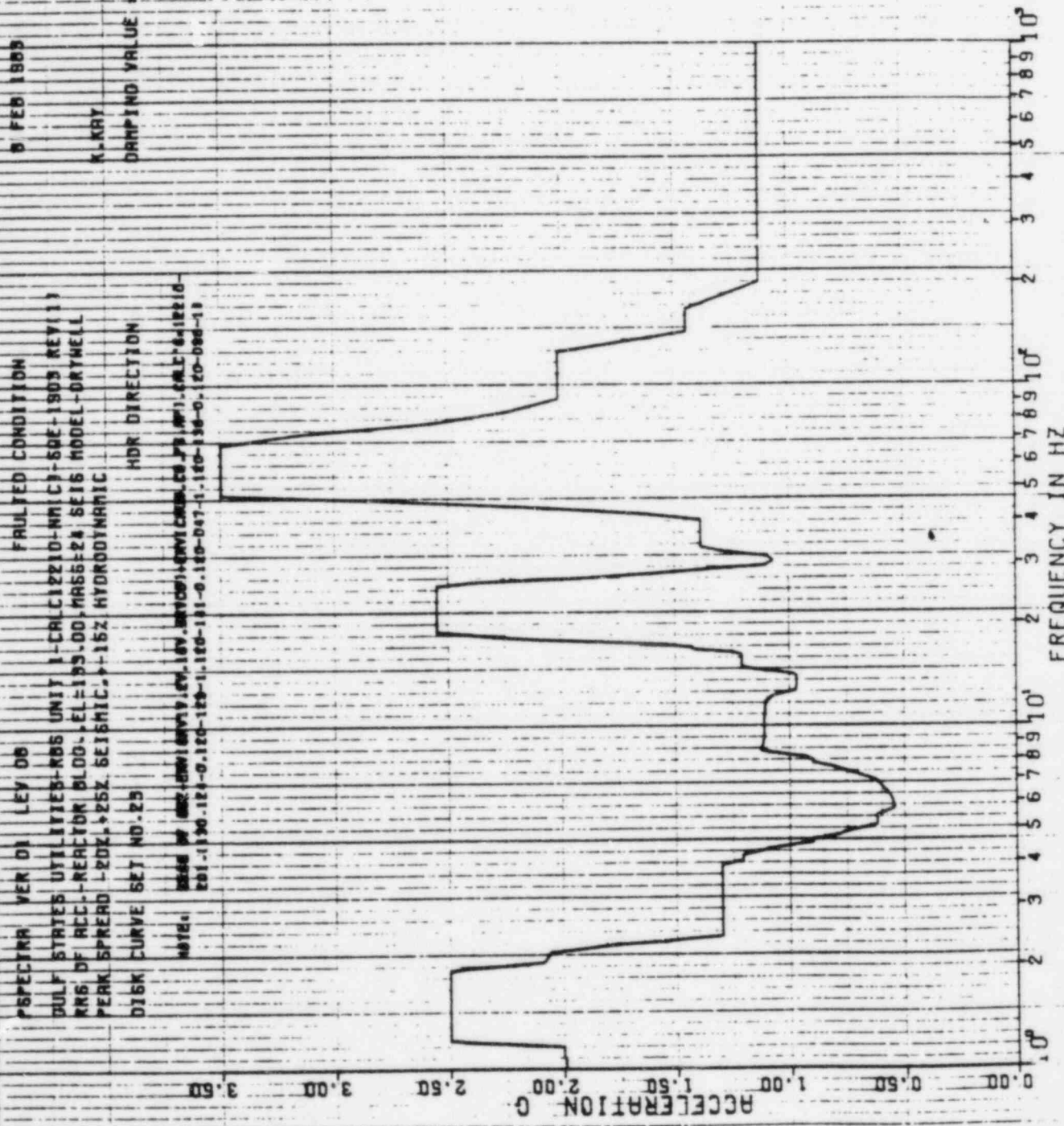
DAMPING VALUE = 0.020

SPECTRA VER DI LEY DB
 DULF STATES UTILITIES-RBS UNIT 1-CALC 12210-NR(C)-SDE-1903 REV 11
 RNS OF ACC-REACTOR BLDG., EL-195.00, MASS-24 SETS MODEL-DRYWELL
 PERK SPREAD L-20% +25% SEISMIC, +15% HYDRODYNAMIC

D16K CURVE SET NO. 25

HDR DIRECTION

NOTE: BASED UP 100% DAMPING, 10% SENSITIVE (MINIMUM) CASE, CG 75 (WF), CALC 6-11-61
 201-1190-121-0-120-129-11-180-181-0-180-047-1-180-130-0-120-080-11



4/5 A

9 FEB 1963

K-107

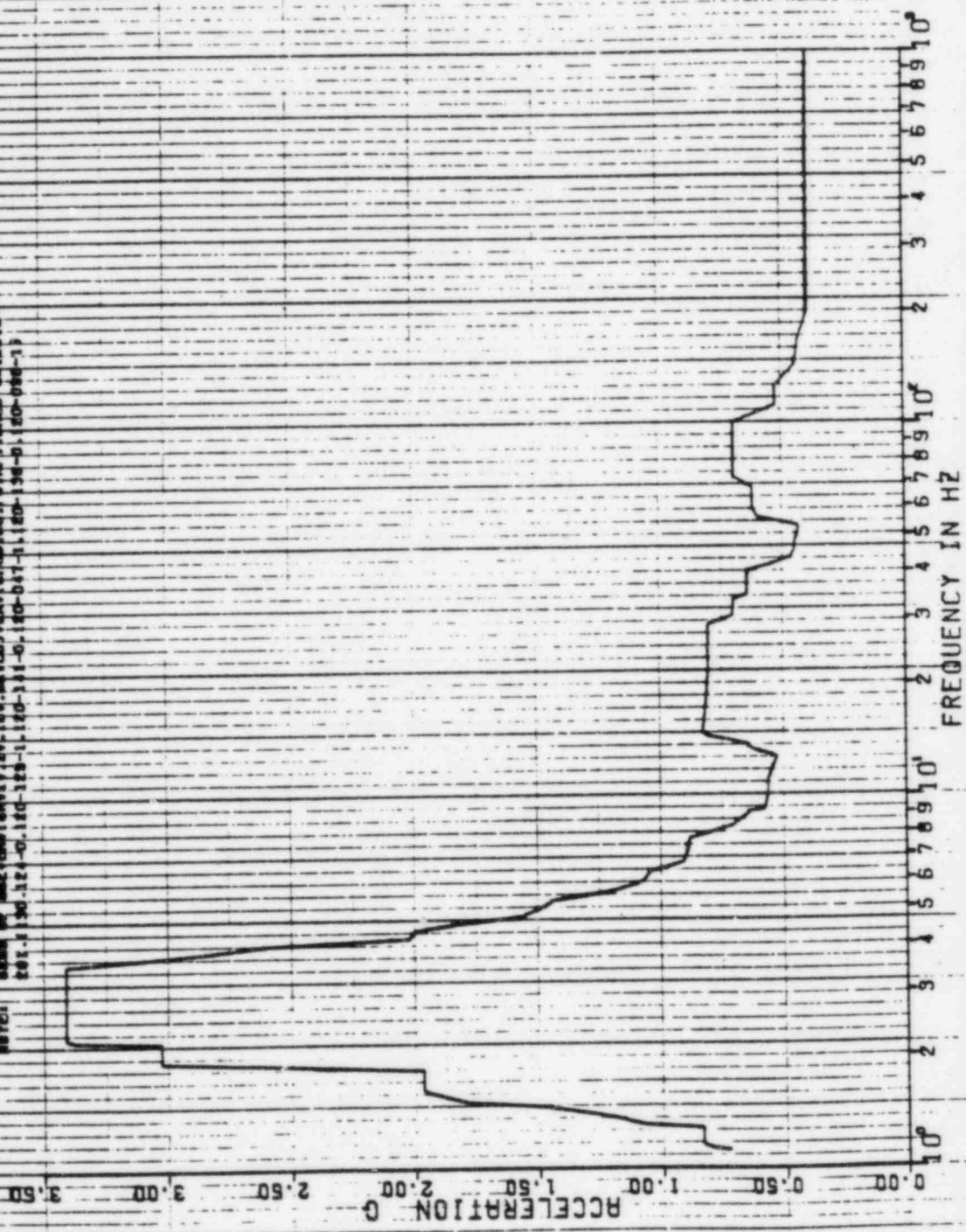
DAMPING VALUE = 0.020

FAULTED CONDITION

PERPECTRA VER 01 LEV 08
DULF STATES UTILITIES-K06 UNIT 1-CR1C12210-NR1C1-50E-1903 REV111
RKG OF ACC.-REACTOR BLDG., EL=135.00, MASS=24.5E16 MODEL-DRYWELL
PERK SPREAD -20Z->25Z SEISMIC.-15Z HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO.23
NOTE: ADDM BY 30E2 (000) 00V1 (V.104.001000).ENV1 (000).CD.78 (MP).0MLT*8.12210-
201.1130.12-0.100-100-11.120-111-0.120-047-11.120-134-0.120-066-1)



97.48

9 FEB 1959

K. XRY

DAMPING VALUE = 0.030

PSPECTRA VER 01 LEY 08
 FAULTED CONDITION
 DULF STATES UTILITIES-RBS UNIT 1-CALC12210-F C1-50E-1903 REV11
 RBS OF ACC.-REACTOR BLDG.-FL1123.00, MASS-24 SETS MADEI.-ORTWELL
 PERK SPREAD.-201.425X.5E16N1C.1-15X HYDRODYNAMIC
 DISK CURVE SET NO. 23
 VER DIRECTION

NOTE: BASE OF 0021201 0AVT.CV.16V.30V00)10M1CHUD.C6.P8.MP1.0RLT.0.12210-
 201.4130.221-0.160-123-116-111-0.160-047-1.160-136-0.160-046-17



10110

9 FEB 1968

K.ARY

DRAWING VALUE = 0.040

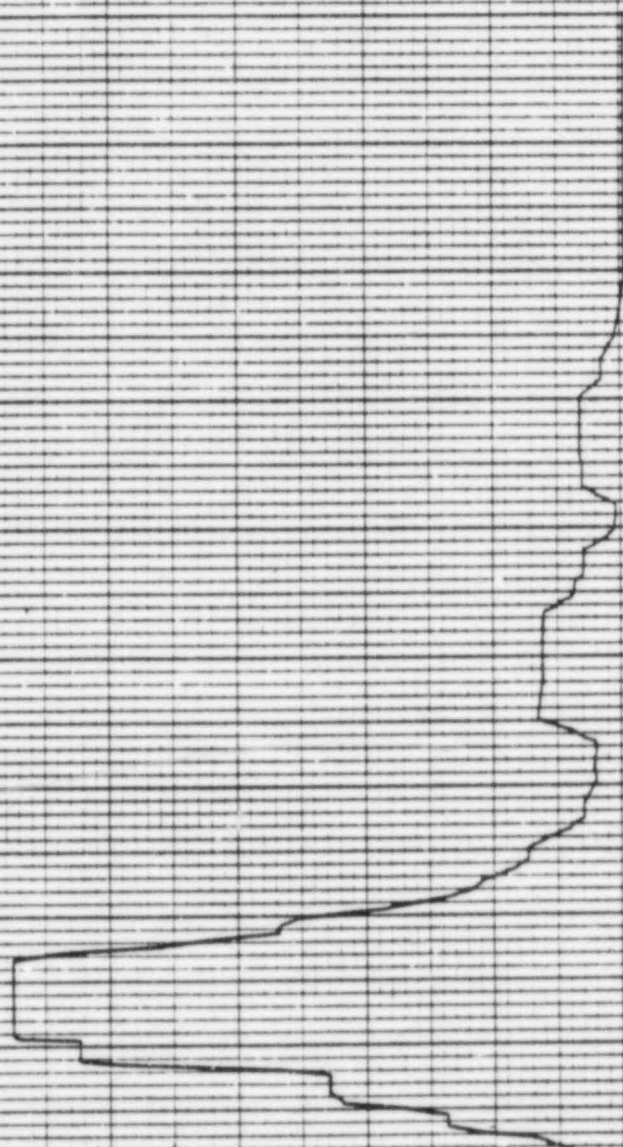
PRINTED CONDITION

SPECTRA VER ON LEV DB
DULF STATES UTILITIES-RBS UNIT 3-CALC 12740-WP1C3-5DE-1903 REV13
RMS OF REC.-REACTOR BLDG.-EL-133-DD-MR65-P4 5E15 MODEL-DRYWELL
PERK SPREAD -20%+25% SEISMIC-#152 HYDRODYNAMIC
DIBK CURVE SET NO.23

VER DIRECTION

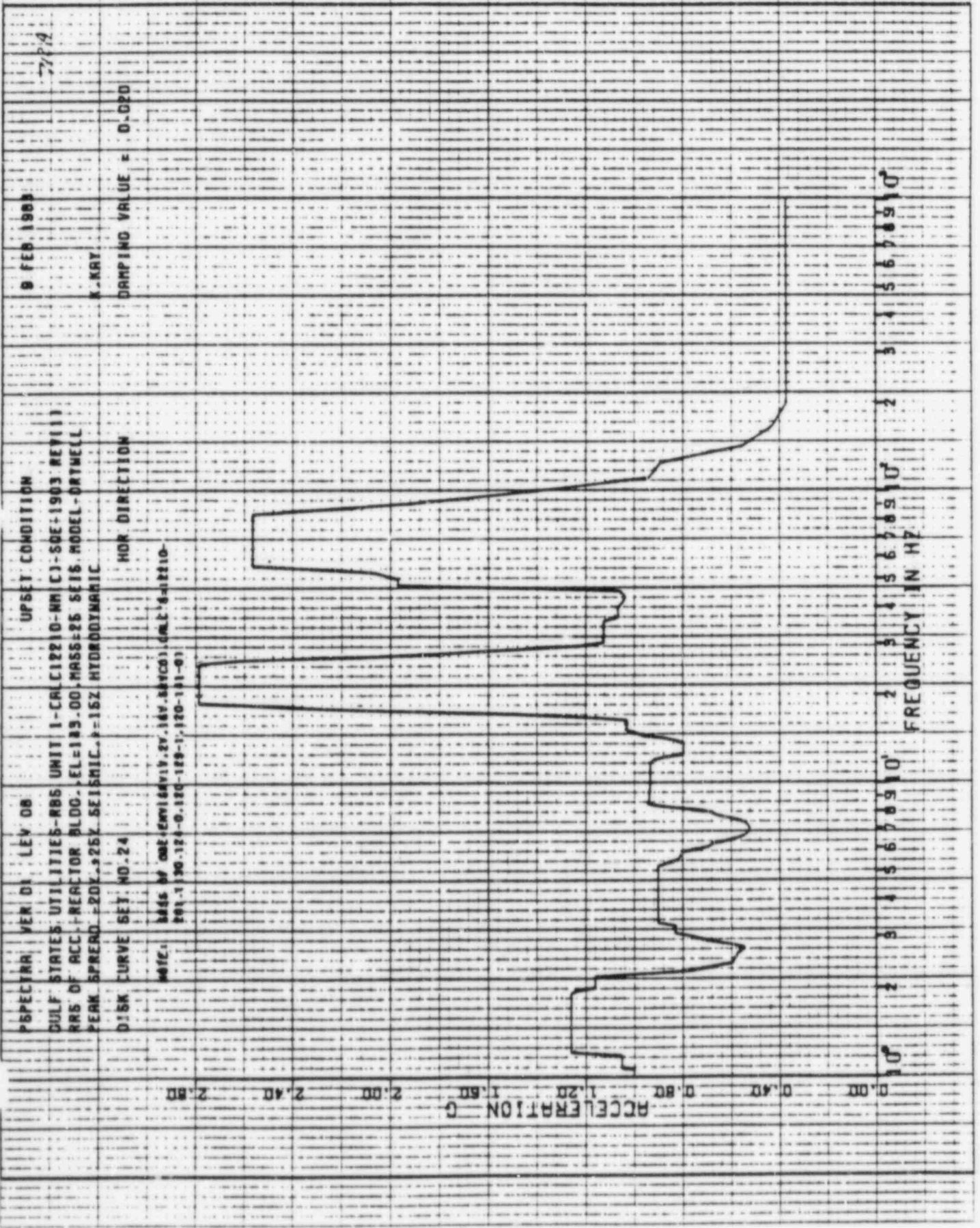
NOTE: BASE OF 602-ANVISA-MV-18V-ANVISA-ENVI-CALC-28 JPS-0P1-CALC-412216-
201-1334-124-Q-370-120-E-180-1-1-0.100-0-1-1.100-330-0-1.100-000-1.1

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80



10^0 2 3 4 5 6 7 8 9 10^1 2 3 4 5 6 7 8 9 10^2

FREQUENCY IN HZ



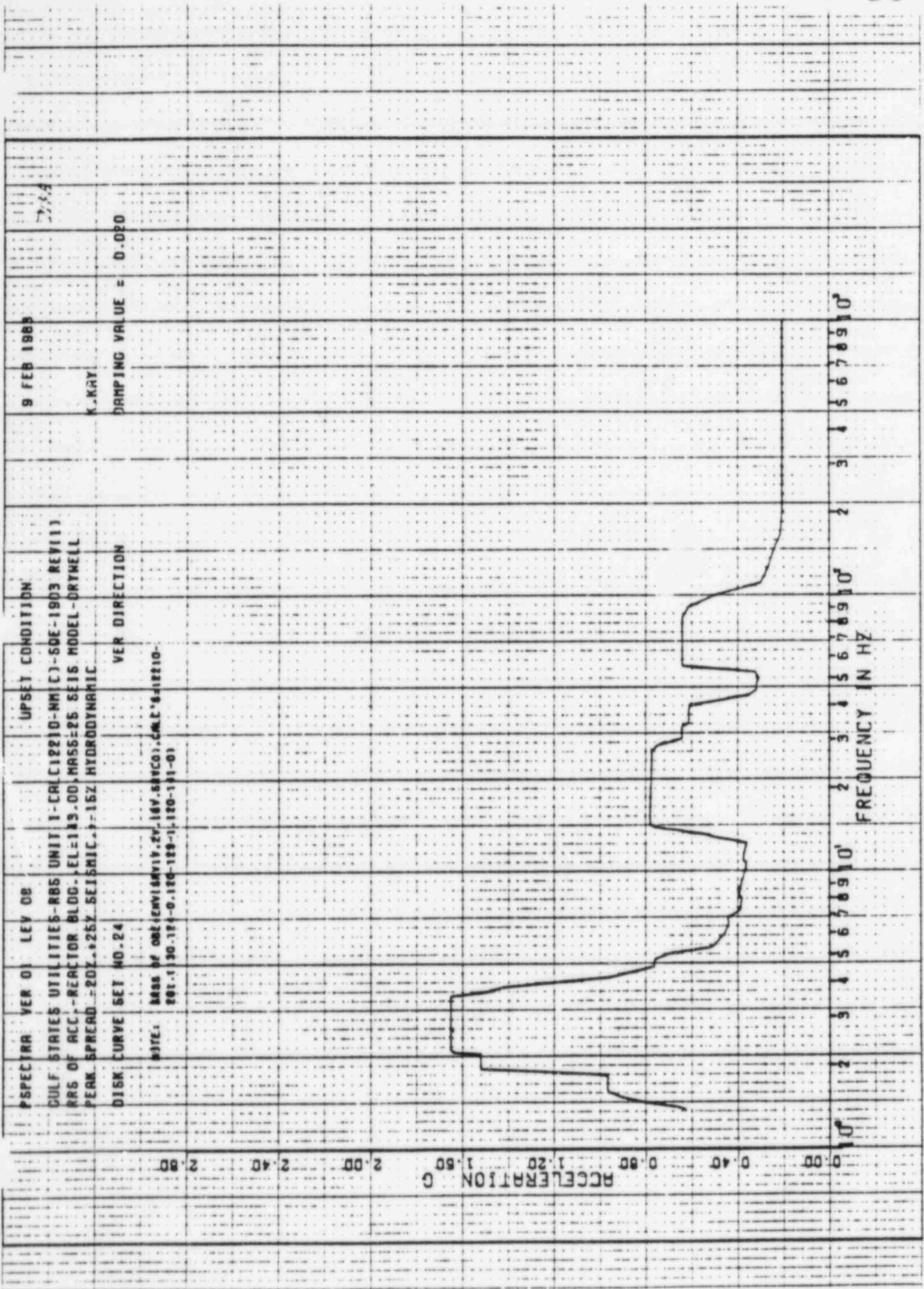
9 FEB 1963
 7772
 K. KAY
 DAMPING VALUE = 0.020

UPSET CONDITION
 UNIT 1-CALC 12210-MM C1-SOE-1903 REVI 1
 RRS OF ACC-REACTOR BLOC., EL=145.00, MASS=25 SEIS. MODEL-ORTWELL
 PEAK SPREAD = 20%, 25% SEISMIC, P=152 HYDRODYNAMIC
 DISK CURVE SET NO. 24
 NON DIRECTION

DATE: 1963-02-12 08:12:00
 101-130-121-0-120-129-1-120-131-01

ACCELERATION

FREQUENCY IN HZ



SPECTRA VER 01 LEV 08
 CULF STATES UTILITIES-RBS UNIT 1-CR1C12210-WHIC7-SQE-1903 REV111
 RBS OF ACC-REACTOR BLOC., EL-119.00, MASS=25.5E16, MODEL-DRYWELL
 PEAK SPREAD -20%, 25% SEISMIC, 15Z HYDRODYNAMIC
 UPSET CONDITION
 DISK CURVE SET NO.24
 VER DIRECTION
 DAMPING VALUE = 0.020
 NOTE: MASS OF ONE ENVIRONMENTAL VIB. 18V.84VCO1, CMLT 6-12210-
 201.130.174-0.120-129-1, 120-131-0

9 FEB 1965

K. KAY

8 FEB 1963

9/1A

FAULTED CONDITION

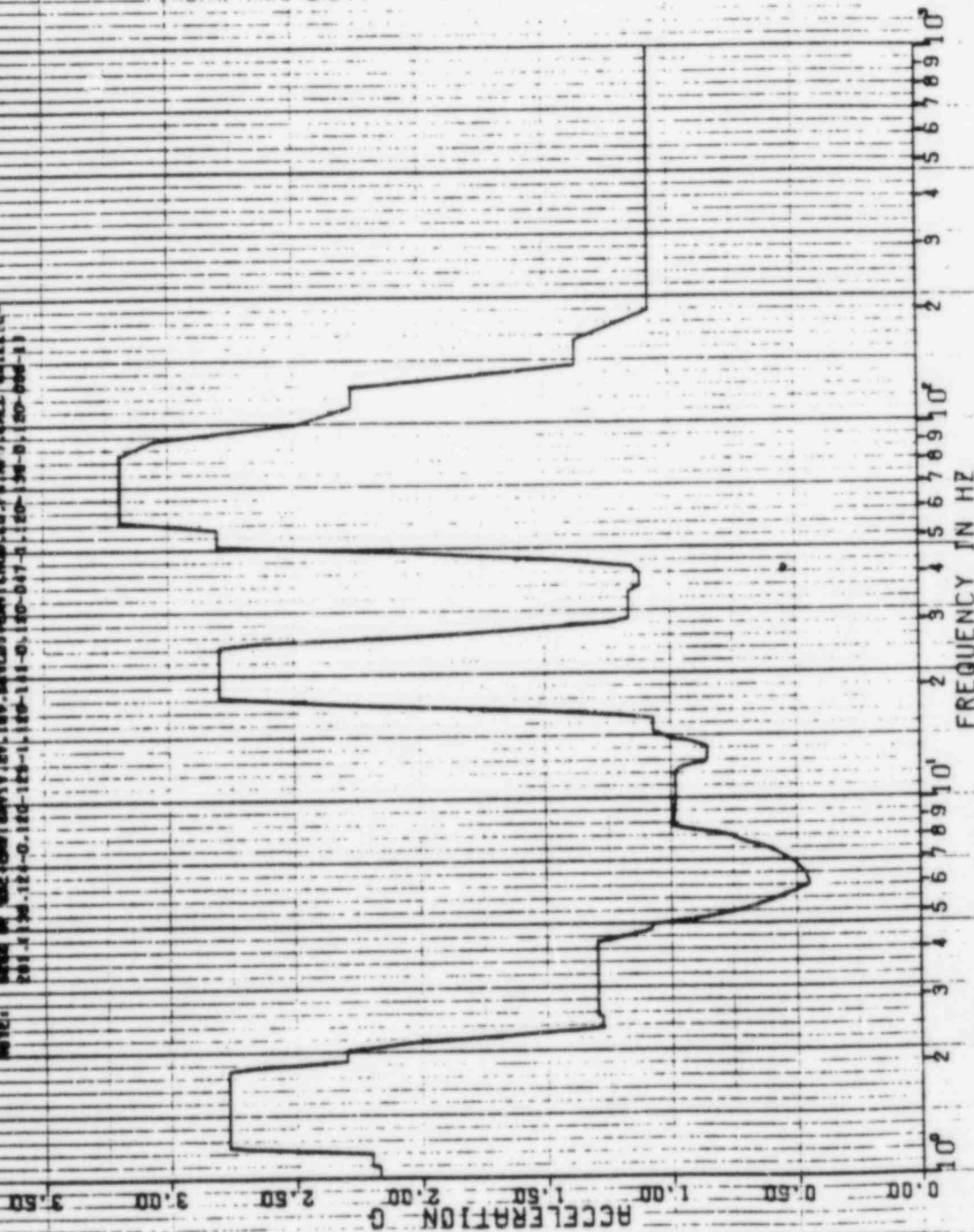
PSPECTRA VER 01 LEV 08
GULF STATES UTILITIES-RBS UNIT 1-CALC12210-NR(C)-SAL-1903 REV11
RBS OF ACC-REACTOR BLDG. TEL=143.00, PASE=25 SE16 MODEL-ORYNELL
PERK SPRED -ZDL->25Z SE16NIC. -15Z HYDRODYNAMIC
DISK CURVE SET NO.24

K.KRY

DAMPING VALUE = 0.020

HOR DIRECTION

NOTE: DATA BY 102-080108V17V, 109-08VCS3-JONV1CHD-CH.74 (P), (ALL) 0-1122(C)
201-134-124-C-100-100-1, 100-111-C-100-017-B-100-100-B, (50-000-1)



1977A

8 FEB 1985

K. KRY

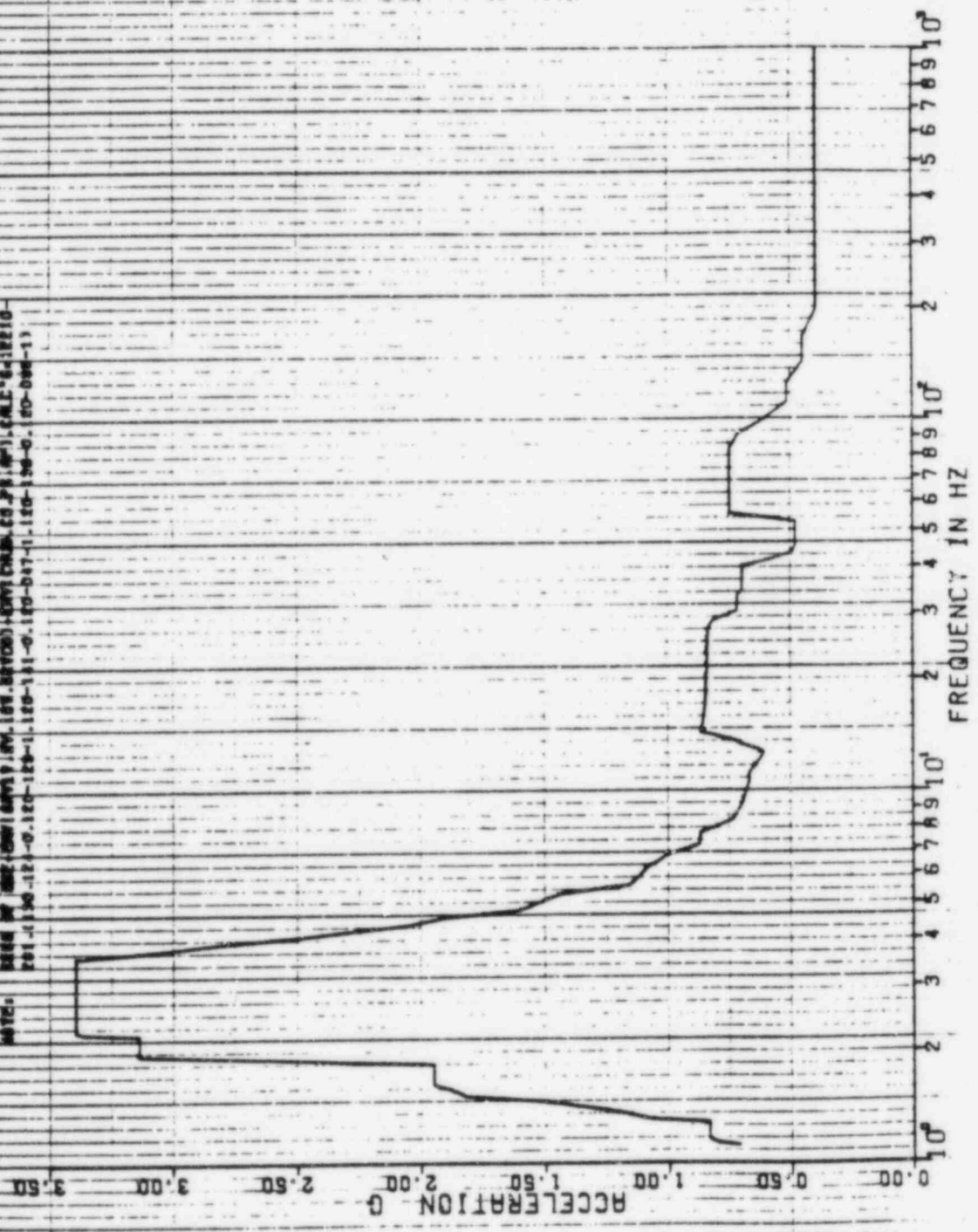
DAMPING VALUE = 0.020

FRUITED CONDITION

SPECTRA VER 03 LEV 06
DULF STATES UTILITIES-RDS UNIT 1-CALCULATED-NM(C)-SDE-1983 REV 11
RMS OF ACC-REACTOR BLDG., ELE 149.00, PRESS 25 SEIS MODEL-DAYWELL
PERK SPHERD -207.125% SEISMIC. -1.1% HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO. 24
NOTE: THIS IS THE SAME AS THE ONE IN THE REPORT FOR THE SAME UNIT, BUT WITH A DIFFERENT DAMPING VALUE.
SEE THE REPORT FOR THE SAME UNIT FOR THE ORIGINAL CURVE.



4244

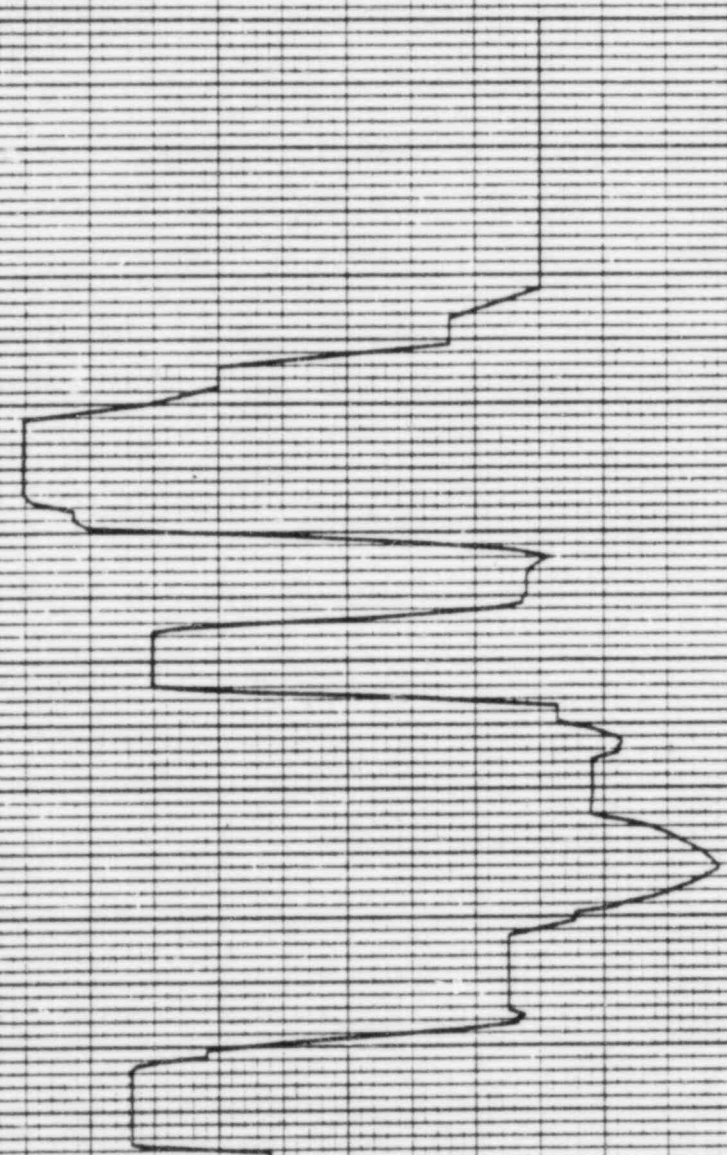
9 FEB 1959

PROSPECTOR VER 01 LEY 08
 FAULTED CONDITION
 GULF STATES UTILITIES-RBS UNIT 1-CALC12210-MN1 C1-50E-1959 REV(1)
 RMS OF ACC.-REACTOR BLDG, FL=119,00, MASS=25 SETS MODEL-ORYNELL
 PERK SPHERD -20E-25Z SEISMIC 1-16X HYDRODYNAMIC
 DISK CURVE SET NO.24
 HDR DIRECTION
 NOTE: 20E-25Z SEISMIC 1-16X HYDRODYNAMIC
 20E-25Z SEISMIC 1-16X HYDRODYNAMIC

K.KRY

DAMPING VALUE = 0.050

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80



10^0 2 3 4 5 6 7 8 9 10^1 2 3 4 5 6 7 8 9 10^2

FREQUENCY IN HZ

9-15-73

5 FEB 1968

FAULTED CONDITION

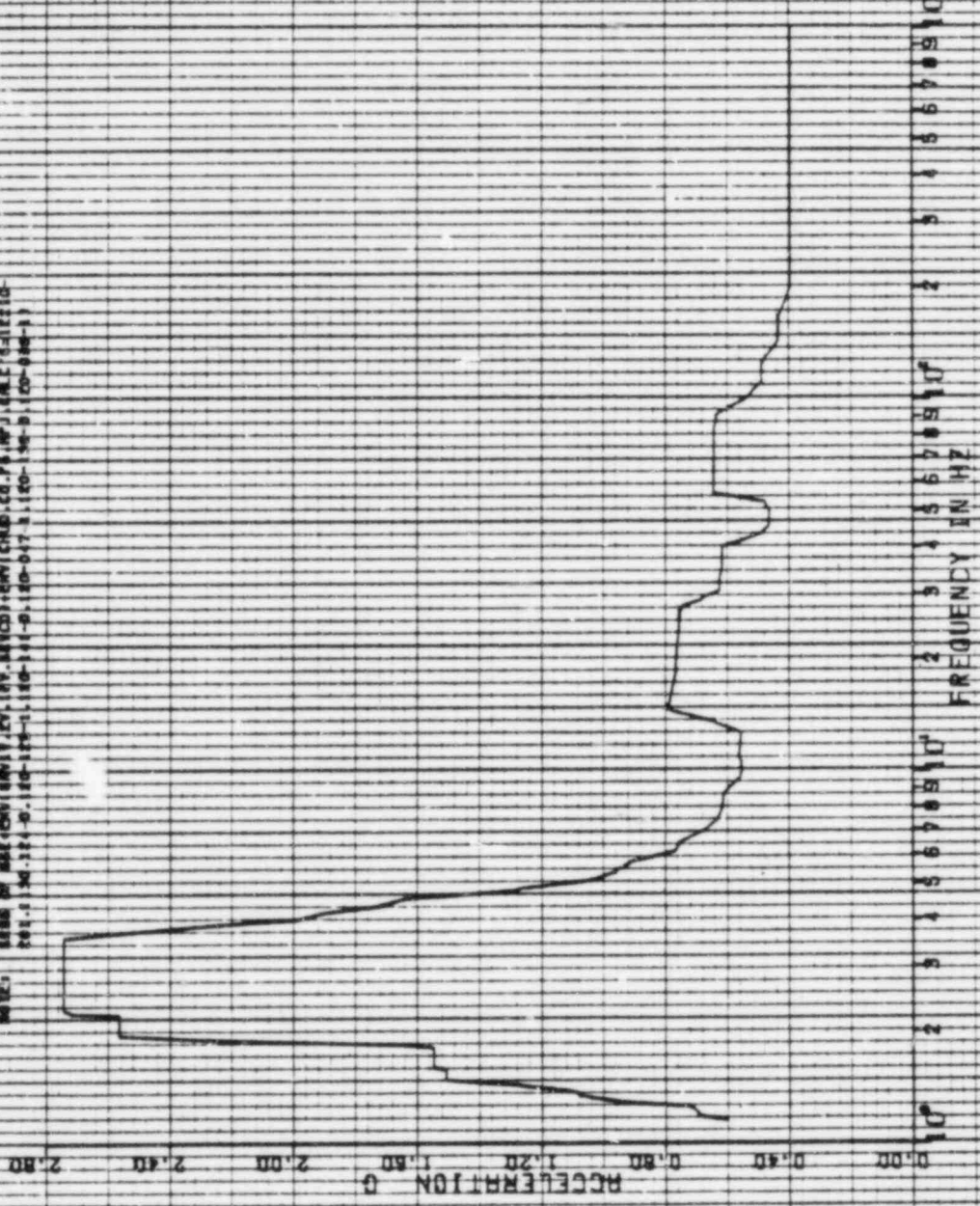
SPECTRA VER 01 LEV 08
DULF STRAYS UTILITIES-RBS UNIT 1-CALC12210-WA(C)-50E-1903 REY11
RNS OF REC-REACTOR BLDG, EL-143.00, MASS-25 SE16 MODEL-WATWELL
PEAK SPREAD -20% ±25% SEISMIC ±15% HYDRODYNAMIC

Z-MAX
DAMPING VALUE = 0.050

VER DIRECTION

DISK CURVE SET NO.24

NOTE: BASE OF REC-COIL (REV) CV, (RV, MV, CD), (MVIC), (CD, PA, RF), (RE, L, S, 12210-
201, 130, 124, 0, 120-120-1, 120-121-0, 120-017, 1, 120-120-0, 120-000-1)



10⁰

10¹

10²

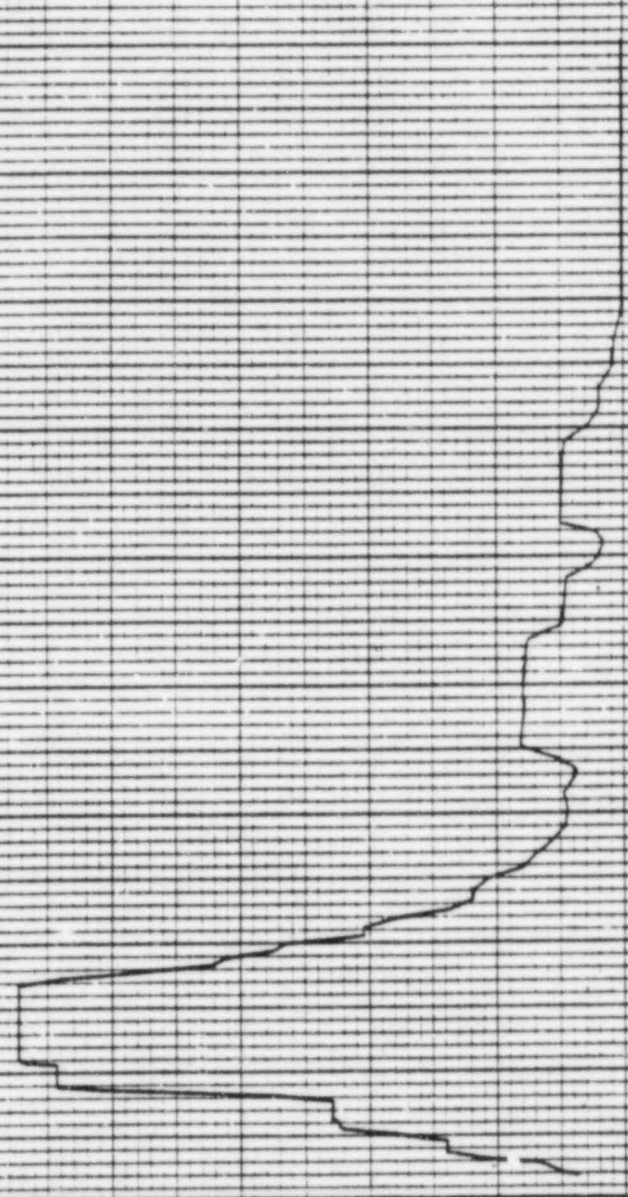
10⁰

9 FEB 1985
K. RRT
DAMPING VALUE = 0.040

INSPECTOR: VIK DO LEV DB
FAULT STATES UTILITIES-RBS UNIT 1-CALCIZZO-NMCI-6DE-1803 REV11
RIS OF MCI-REACTOR BLDG..EL-145.DD.MPSS-2S SET6 MODEL-DRYWELL
PERK SUPRPH-20Z..A-26Z SET6MCI..A-15Z HYDRDYNRMOE
DISK CURVE SET NO.24
VER DIRECTION

NOTE: AREA OF AGE (CMV) 841V.4.189 .CHVCI-26VCI.DD.CB.MC.MP.L.CALC. 8412216
201.0190.12310.130-1891.130-141-0.180-007.1.180-130-0.180-000-11

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80



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

10.37.9

744

9 FEB 1983

K. KRY

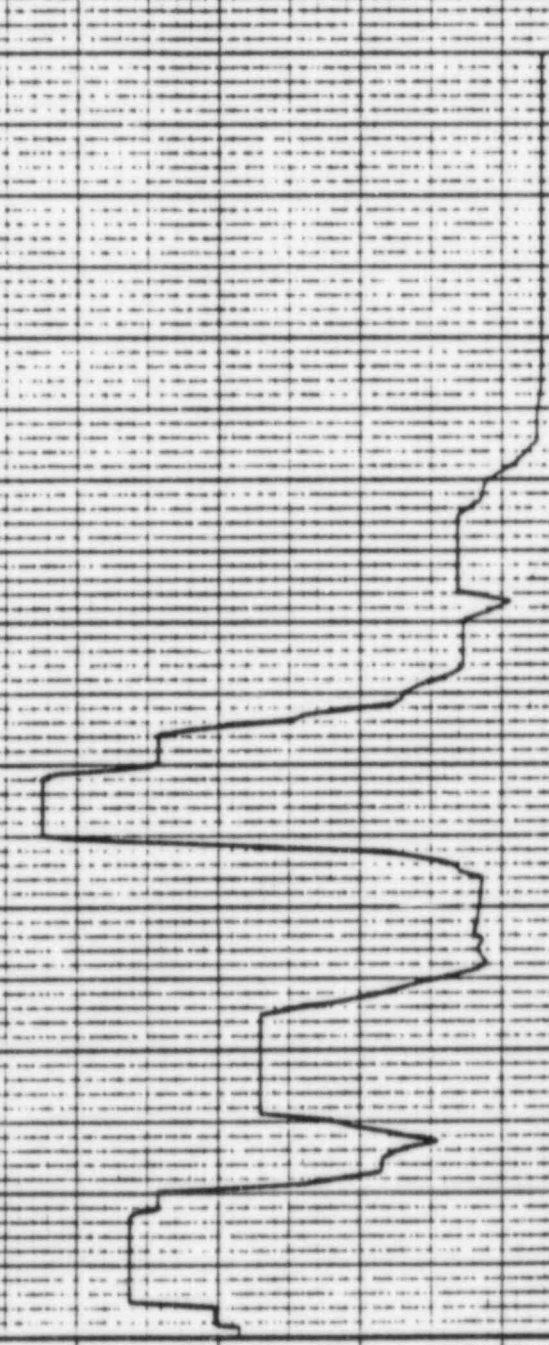
DAMPING VALUE = 0.020

SPECTRA VER 01 LEY 00
 DULF STATES UTILITIES-RRS UNIT 1-CALC12210-MM CI-50E-1903 REV111
 RRS OF ACC.-REACTOR BLOC., EL=162.00, MASS=26 SEIS.MODEL-DRYWELL
 PEAK SPREAD = 20%, +25% SEISMIC, = 15% HYDRODYNAMIC
 DISK CURVE SET NO. 25
 UPSET CONDITION
 NON DIRECTION

DATE: 08/13/82 (REV. 8/13/82)
 MASS OF OBS. (CONV. TO 1% (REV. 8/13/82))
 201.1 130.184-0.120-129-1, 120-141(-0)

ACCELERATION G

FREQUENCY IN HZ



5.676910⁰

2

3

4

5

6

7

8

9

10

11

12

13

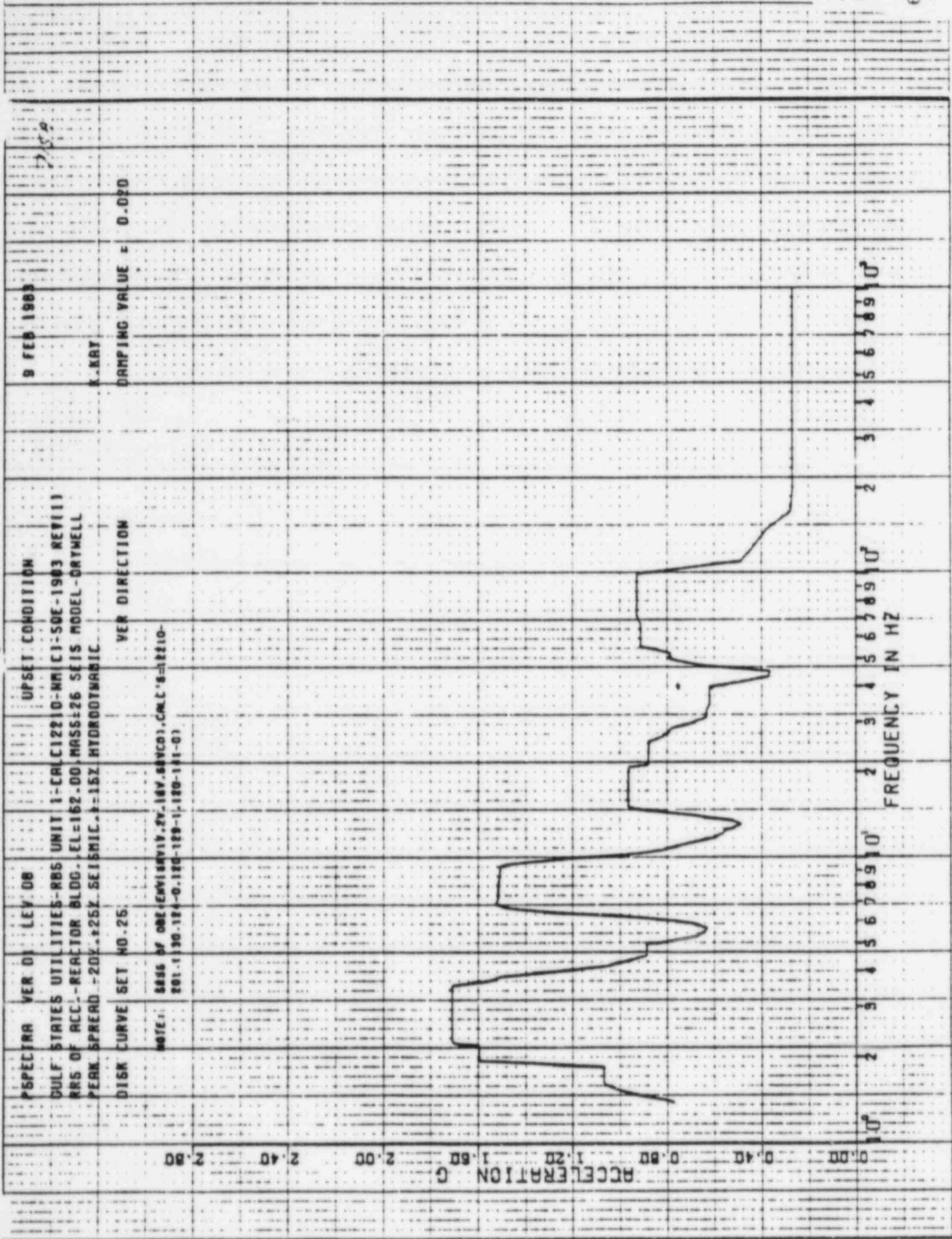
14

15

16

17

18



9 FEB 1983

K. MAY

DAMPING VALUE = 0.020

UPSET CONDITION

CULF STATES UTILITIES-RBS UNIT 1-CALC 12210-WA CI-50E-1983 REV 11
 RBS OF ACC.-REACTOR BLDG., EL-162.00 MASS±26 SETS MODEL-DRYWELL
 PEAK SPREAD -20%±25% SEISMIC ±15% HYDRODYNAMIC

VER DIRECTION

NOTE: MASS OF ONE ENVIRONMENT 27,184,816 LB, CALC '8=2210-
 701-130-184-0-180-189-1,180-141-0

SPECTRA VER 01

LEV 08

DISK CURVE SET NO. 25

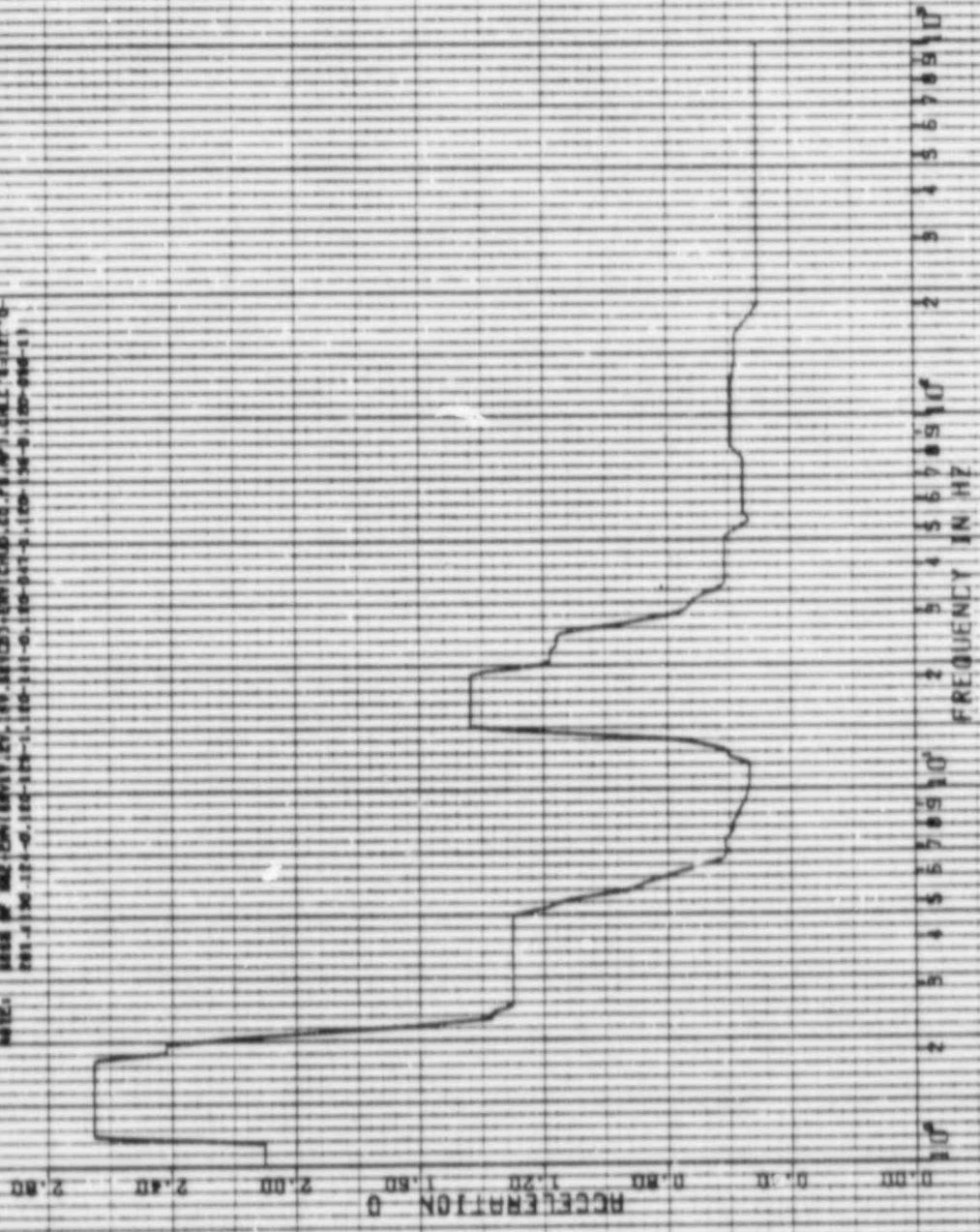
ACCELERATION G

FREQUENCY IN HZ

9 FEB 1983
1246 H

PBPELTRA VER 01 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CALC12210-MNIC-68E-1983 REV117
 RMS OF REC-REACTOR BLDG., EL=182.00, MASS=26 6E16 MODEL-BRWELL
 PERK SPREAD: 207.425X SEISMIC, 1-15X HYDRODYNAMIC
 DISK CURVE SET NO. 25 HDR DIRECTION
 MATE: MISS W 002-000180VY.CY, 16V.JETCO-00VICH0.D, 0.79.MF, 0.68.C, 7.6.187.0
 281.136.184-0.100-104-1.100-111-0.100-017-3.100-136-9.100-098-1

K.MRY
DAMPING VALUE = 0.030



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

9 FEB 1985
10:55:29

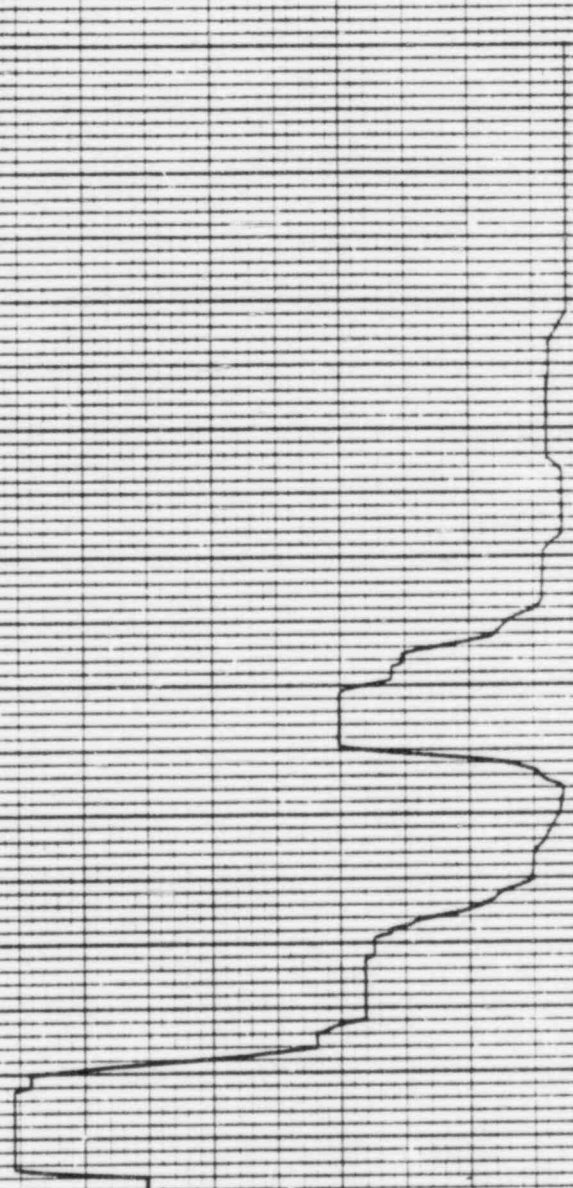
FRUITED CONDITION

PERCENTAGE PER DB 15W DB
DULF STATES UTILITIES-RBS UNIT 3-CALC1221D-WHIC31-SDE-1805 REVID
MRS OF ACC.-REACTOR BLDG.-EL-152-DD, MRS625 SE15 MODEL-DRYWELL
PERK SPREAD - 20% - 25% SEISMIC - 15% HYDRODYNAMIC
DIBX CURVE SET NO. 25
HDR DIRECTION

K.ARY
DRAWING VALUE = 0.040

NOTE: READ BY 662-ENVIA6V15.DV.BAY.ANYC011-ENVIC010.C0.78.MRS.CAIC.642210-
201-1530-123-D-150-120-151-0-150-047-1-150-130-0-150-040-11

ACCELERATION 0 0.80 1.60 2.40 3.20 4.00 4.80 5.60 6.40 7.20 8.00 8.80 9.60 10.40 11.20 12.00



10 9 8 7 6 5 4 3 2 1 0
FREQUENCY IN HZ

28A

9 FEB 1963

K. MAY

DAMPING VALUE = 0.020

SPECTRA: VER 0 LEV 08
 GULF STATES UTILITIES-RBS UNIT 1-CALC 12210-MM(C)-S0E-1903 RE(11)
 MRS. OF ACC.-REACTOR BLOC., EL=105.00, MRS5127 SEIS MODEL-DRYWELL
 PEAK SPREAD -20%±25% SEISMIC., ±15% HYDRODYNAMIC
 DISK CURVE SET NO. 26
 UPSET CONDITION
 HOR DIRECTION

0072: MASS OF ONE CHANNEL 19.2V. 16V. 8VCO3, CMLC 6-12210-
 201.1 30.12 ± 0.120 124-1 120-111-0

ACCELERATION 0 0.40 0.80 1.20 1.60 2.00 2.40 2.80

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



717A

9 FEB 1963

K. KAY

DAMPING VALUE = 0.020

UPSET CONDITION

GULF STATES UTILITIES-RBS UNIT 1-CALC 12210-NM(C)-SCE-1903 REV 11
RRS OF ACCL-REACTOR 8100, EL=105.00 MASS=27 SETS MODEL-DAYWELL
PEAK SPREAD -20% +25% SEISMIC. +15% HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO. 26

NOTE: MASS OF ONE-DIMENSIONAL 2V. 18V. 84V(CB). CALC'G-RATIO
201.1 30.124-0.120-129-1.120-141-0)

PSPEC/RA VER 0 LEV 08

ACCELERATION G

10⁰

0.00

0.40

0.80

1.20

1.60

2.00

2.40

2.80

FREQUENCY IN HZ

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

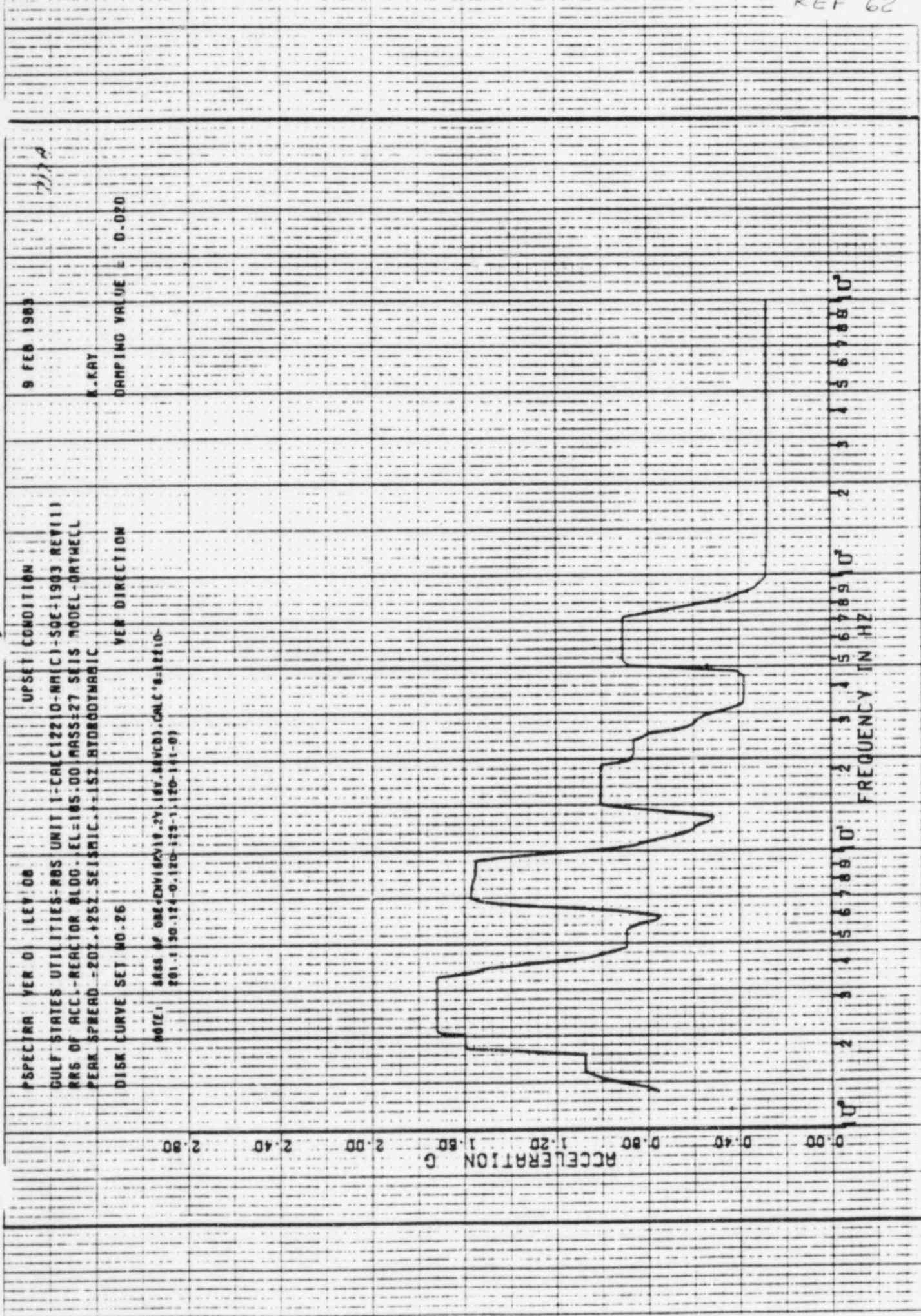
20

21

22

23

24



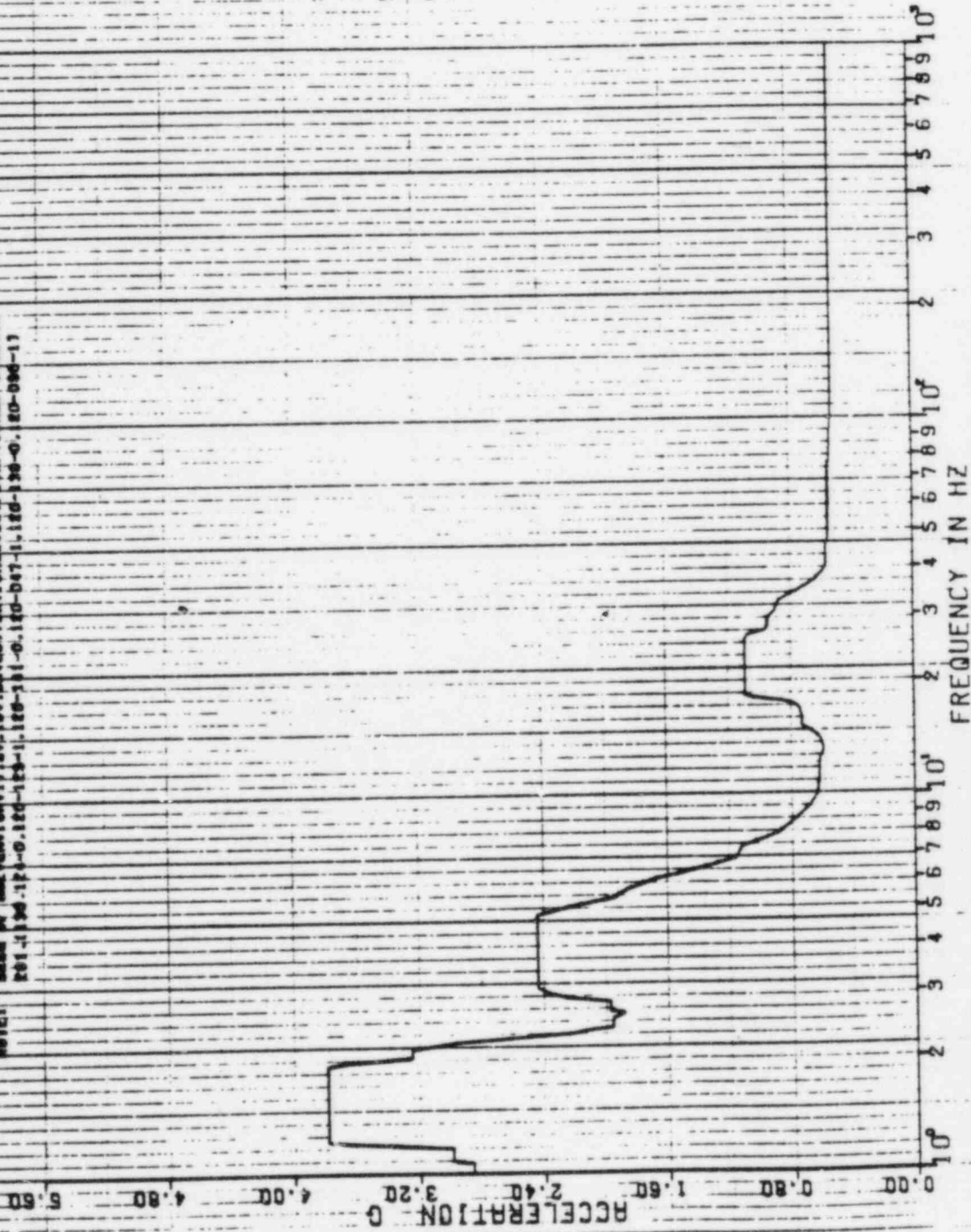
920' A

8 FEB 1963

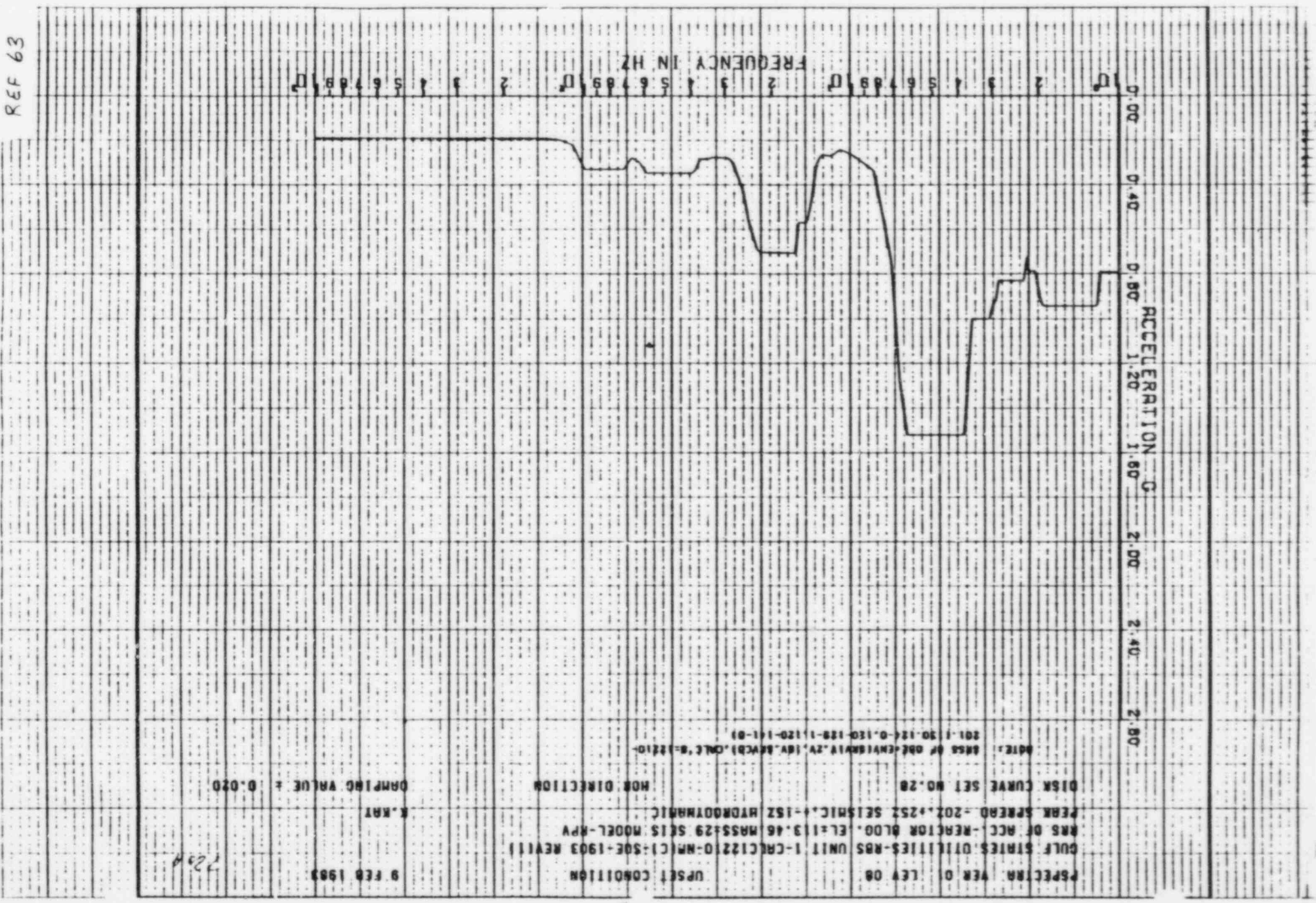
K. KRY

DAMPING VALUE = 0.020

PSPECTRA VER 01 LEV 08
 FRUITED CONDITION
 GULF STATES UTILITIES-RDS UNIT 1-CALCIZ10-MN(C)-5DE-1903 REV(1)
 NMS OF REC. REACTOR BLDG.-EL=185.00, MASS=27 SEIS MODEL-DRYWELL
 PEAK SPREAD -20% > 25% SEISMIC. -15% HYDRODYNAMIC
 DISK CURVE SET NO. 25 HDR DIRECTION
 NOTE: MADE BY MZ-ENVIRONVY BY. 10V. REVCOB-SWITCHM. CO. PS. MNL. CMC-6-12-62
 201-1194-171-0.120-123-1.100-291-0.120-291-1.120-326-0.120-326-17



REF 63



224

9 FEB 1983

DAMPING VALUE = 0.020

1.000

HOR. DIRECTION

SPECTRA VER 0 LEV 08
 UPSHIFT CONDITION
 GULF STATES UTILITIES-RBS UNIT 1-CRAC1220-MH(C)-50E-1903 REV11
 RBS OF ACC-REACTOR BLOO. EL=113.46 MASS=29.515 MODEL-RPV
 PEAR SPREAD -202.252 SEISMIC. +15Z HYDRODYNAMIC

DISR CURVE SET NO.28

NOTE: AREA OF ORIENTATION 2Y (BY RUCB) ON C 8-1210
 201.150.12<-0.150-128-1120-141-01

ACCELERATION G

0.00

0.40

0.80

1.20

1.60

2.00

2.40

2.80

FREQUENCY IN HZ

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

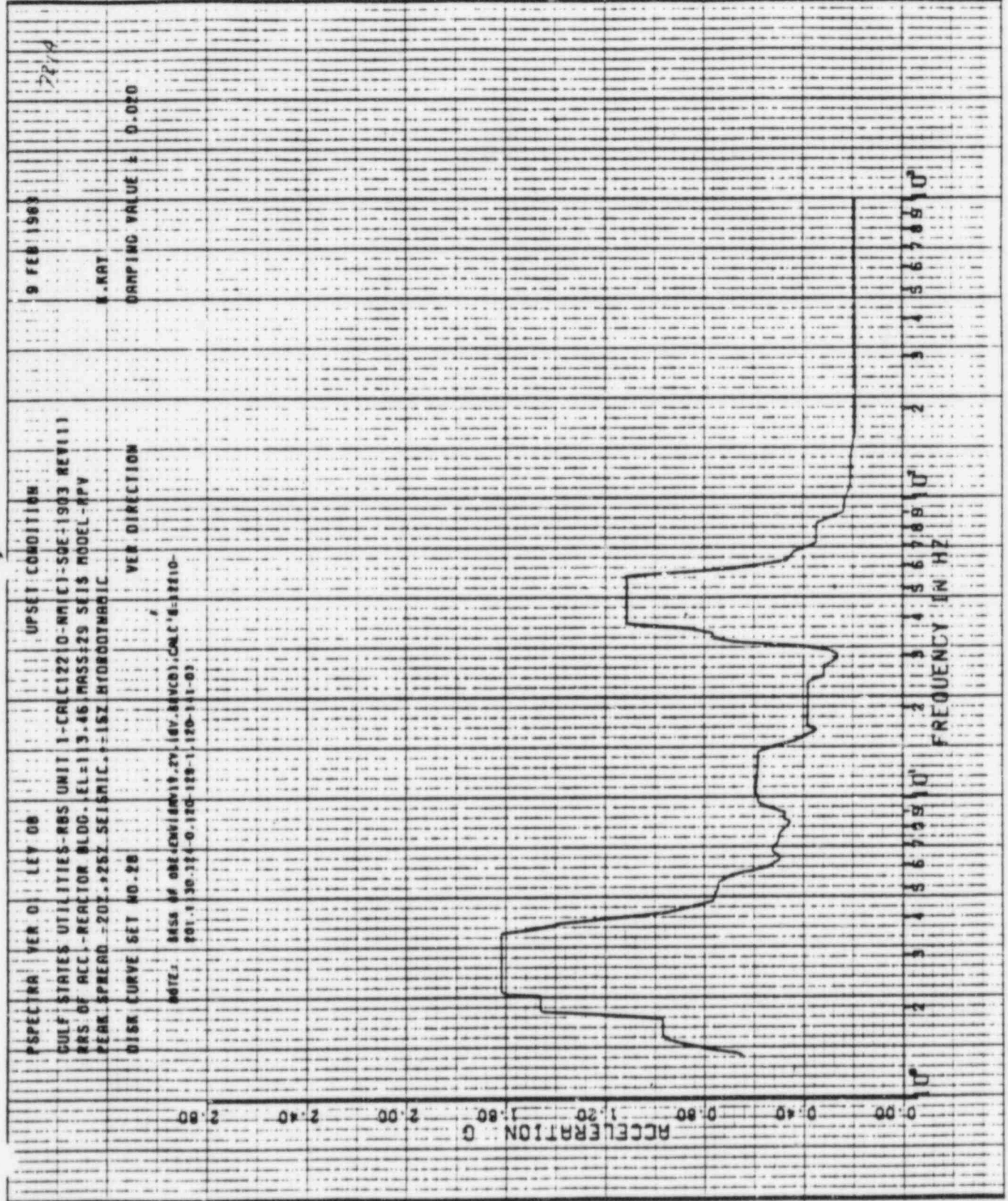
16

17

18

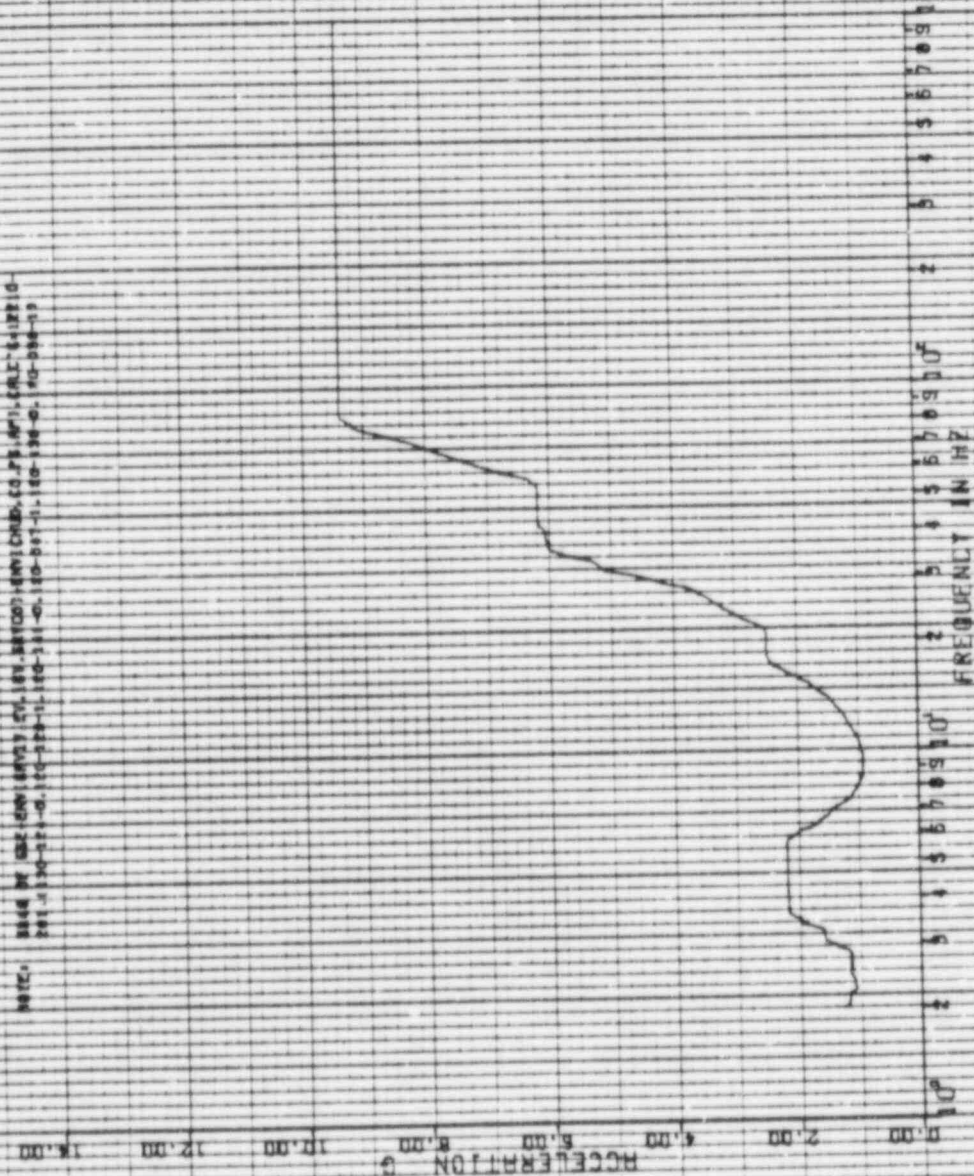
19

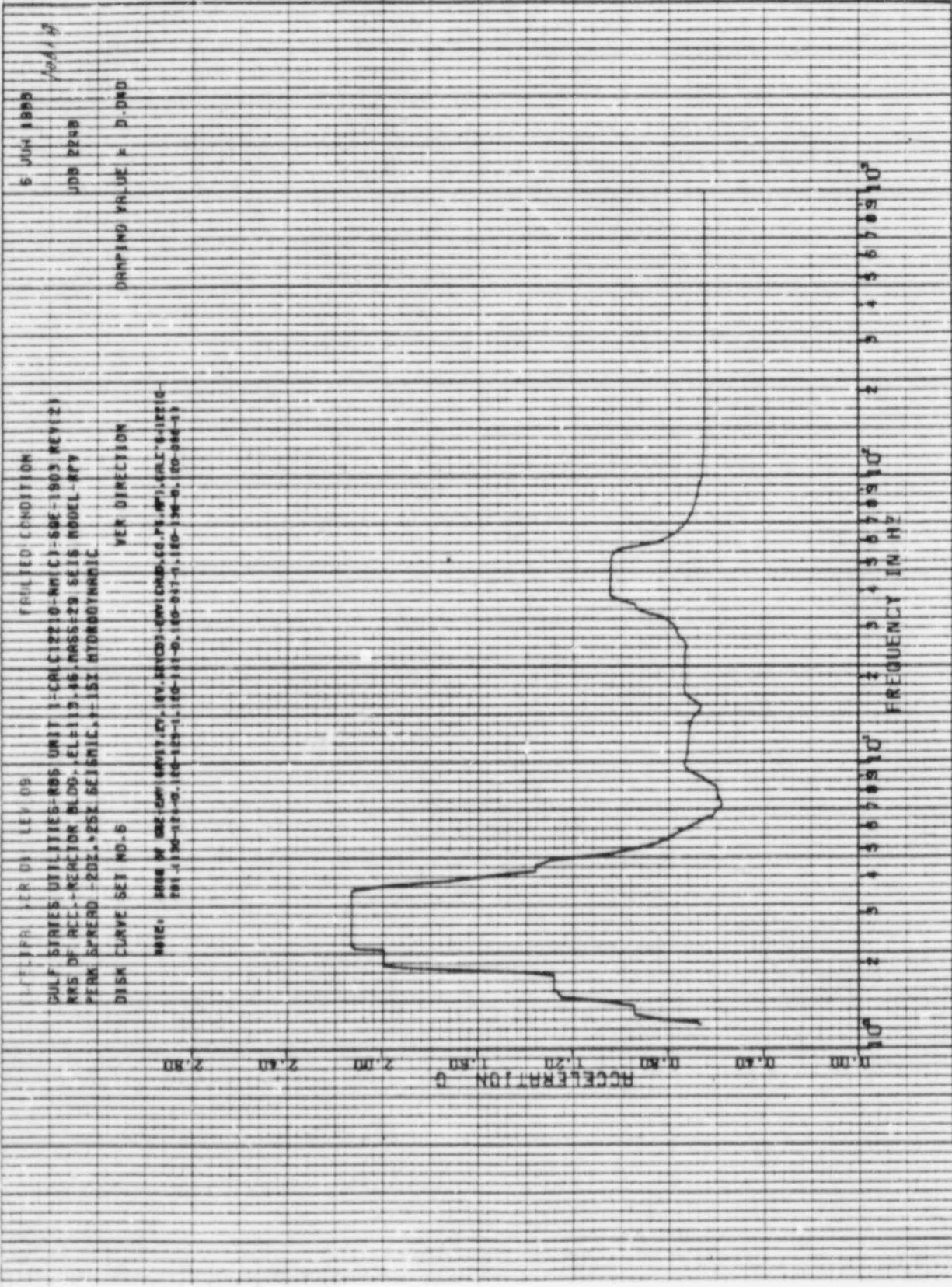
20



5 JUN 1968
JOB #248
DAMPING VALUE = 0.040

FRULTED CONDITION
PSPCTRR VER 01 LEV 08
GULF STATES UTILITIES-NBS UNIT 1-CALC12210-NM(C)-SPE-1903 REV121
RMS OF REC-REACTOR BLDG.-EL-115.46.MASS.29 6E16 MODEL.RPV
PERK.SPREAD-20K.425K.BEISNCL.4-15Z.HYDRODYNAMIC
DISK CURVE SET NO.5
MOR DIRECTION
NOTE: MADE BY GSE-CONV(MV) CVL 18V.887007-HWNT CRD. CO.79.MPI. CRCL-642210
REV.1130-221-0.180-224-1.180-341-0.180-347-1.180-348-0.180-349-0.180-350-13



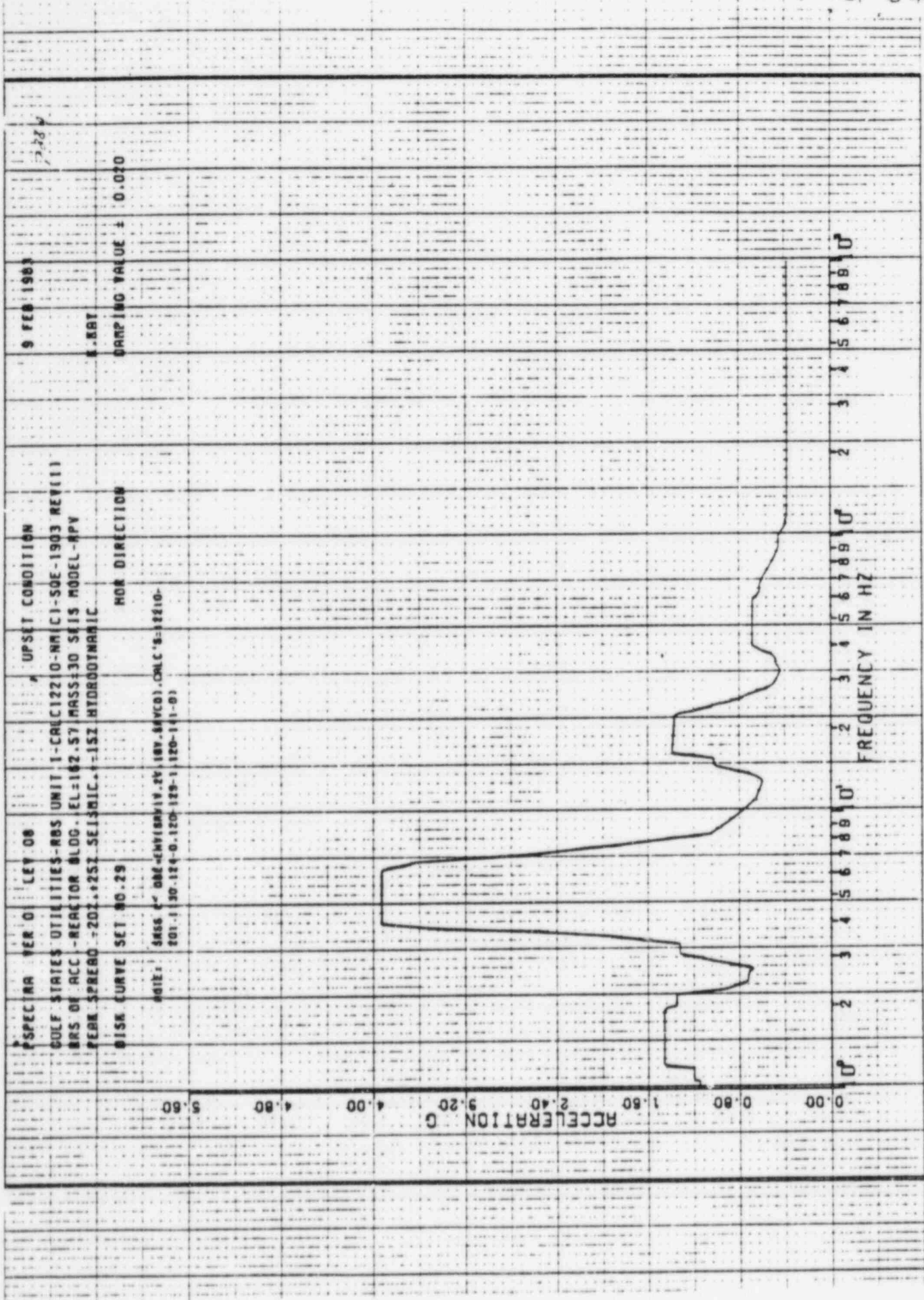


5 JUN 1965
 JDB 2248
 1001 H

FAULTED CONDITION
 PULF STATES UTILITIES-RMS UNIT 1-CALC12210-MN(C)-50E-1909 REV(2)
 RMS OF REC-REXION BLOD-EL-117-46-RMS-29 SEIS MODEL-RPY
 PERK R/READ -RDE-25X SEISALC-15X HYDRODYNAMIC
 DISK CURVE SET NO.5

DRAMPING VALUE = D-DND
 VER DIRECTION

NOTE: 2000 W 002-001 00017 (Y, 10V, 0.01000) (0.01000) (0.01000) (0.01000) (0.01000) (0.01000)
 201 J 130-274-00-100-123-1-100-111-0-100-017-0-100-130-0-00-000-03



7217

9 FEB 1963

SPECTRA VER 0 LEV 08
 GULF STATES UTILITIES-ROS UNIT 1-CALC12210-MM(CI-SOE-1963 REV11)
 BNS OF ACC-REACTOR BLDG. EL±162.57 MASS±30 SEIS MODEL-APV
 PEAK SPREAD -201.425Z SEISMIC.±15Z HYDRODYNAMIC
 DISK CURVE SET NO.29
 UPSET CONDITION

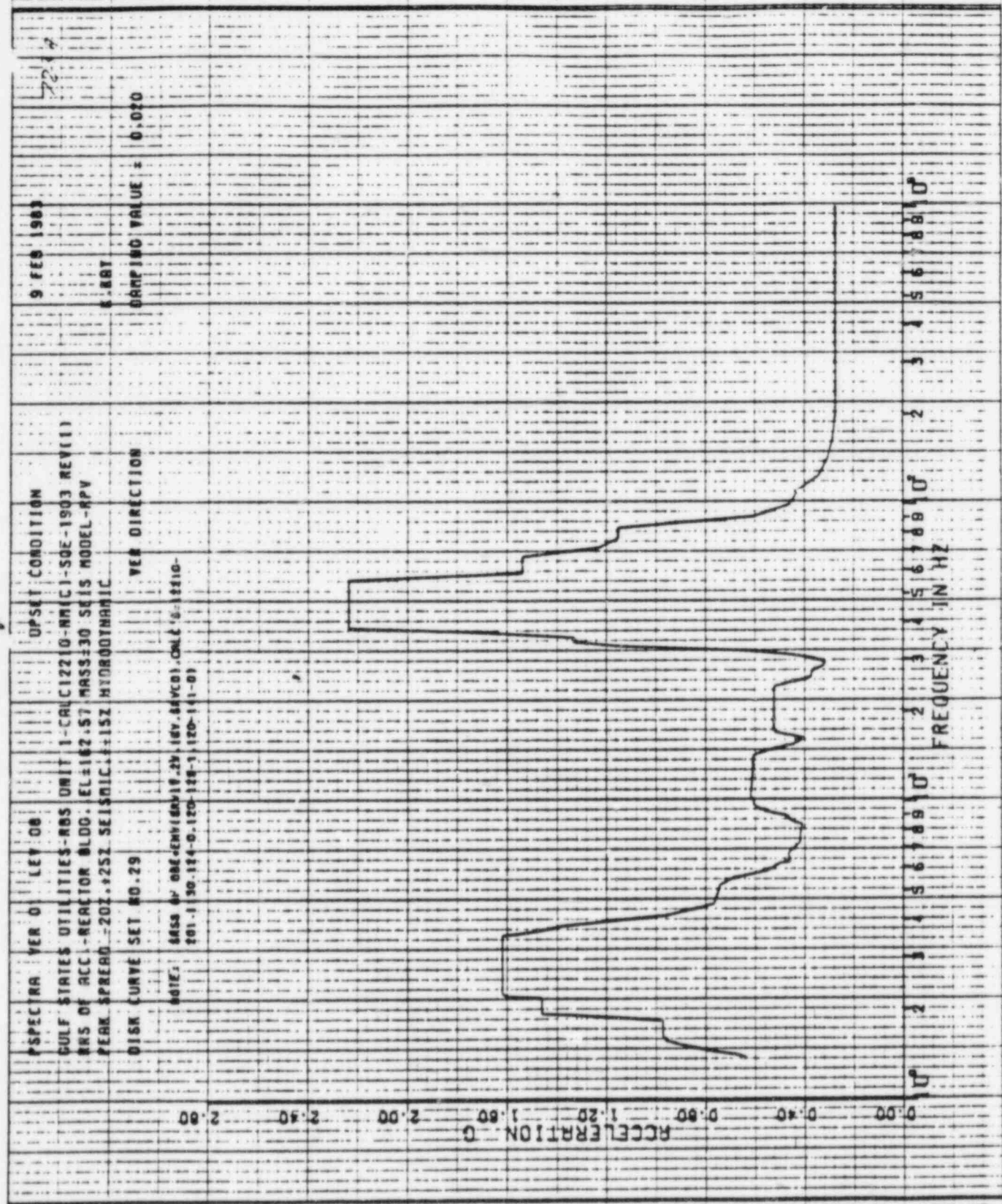
DAMPING VALUE = 0.020

VER DIRECTION

NOTE: 6653 BY 08E-ENVISOR 18.25 (BY 84VCO) CALC 6-18110-
 701-1 30.124-0.120-128-1 (20-11-0)

ACCELERATION G

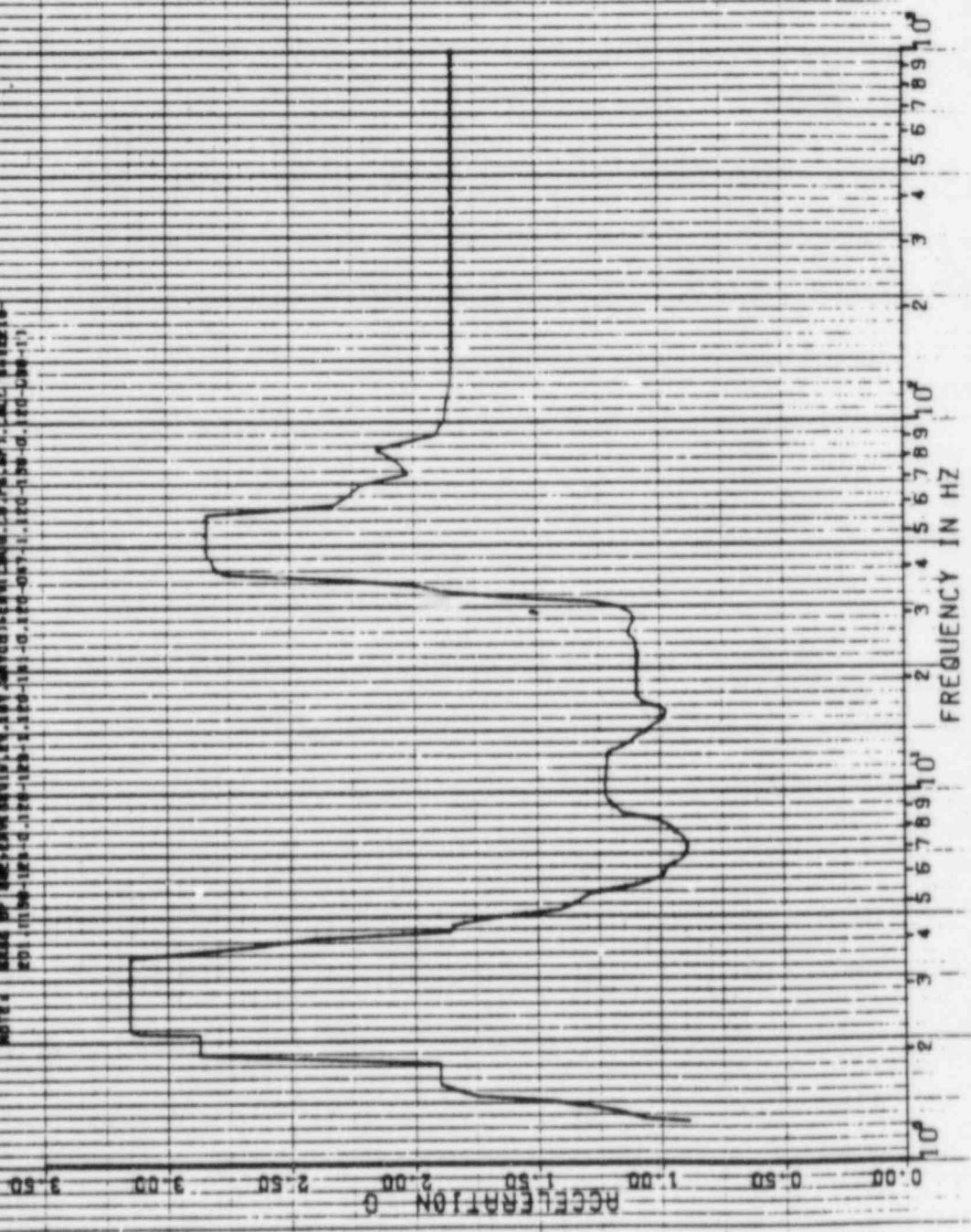
FREQUENCY IN HZ



6 JUN 1983
JOB 1671
9274

PROSPECTOR VER 01 LEV DS
GULF STATES UTILITIES-RBS UNIT 1-CRCL2210-WHICU-SDE-1809 REVIZ1
WORKS OF RECL.-REACTOR BLDG.-EL-152-57-MH55-SD SETS MODEL-RPV
PERM SPREAD-20ZC-25Z SEISMIC.-15Z HYDRODYNAMIC
DISK CURVE SET NO.7
FRUITED CONDITION
VER DIRECTION
DAMPING VALUE = 0.020

NOTE: 1. 100% OF THE TOTAL MASS OF THE SYSTEM IS ASSUMED TO BE CONCENTRATED AT THE REACTOR BLDG. (SEE DISK CURVE SET NO. 7)



JUN 1965
JOB K256

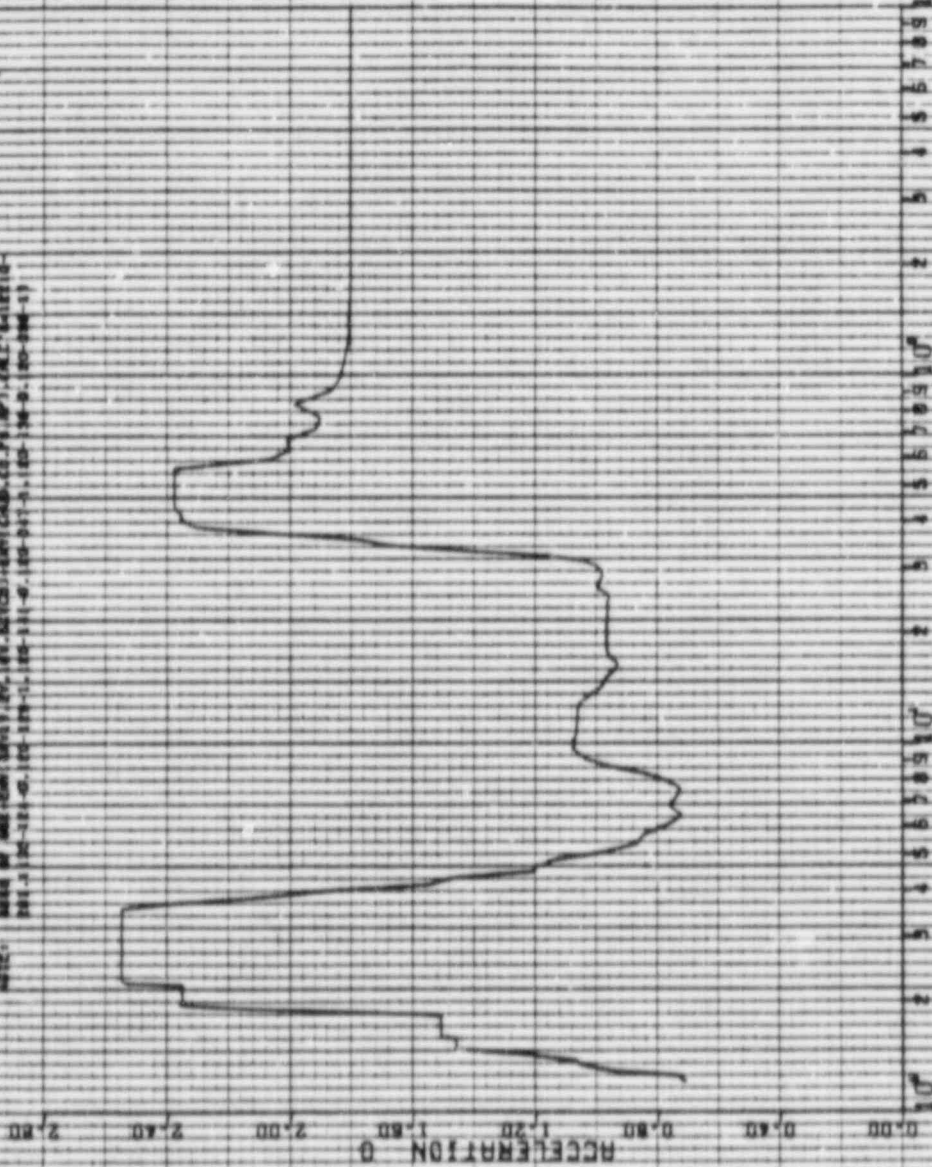
PSPECTRUM VER 01 LEV 08
GULF STATES UTILITIES-NBS UNIT 1-CPLCIBRID-MMC1-68E-1903 REV18Y
NBS OF REC-RECTOR BLDG-EL-152.57, MASS-30 SET16 MODEL-RPY
PEAK SPREAD-RDL-RBSX SEISMIC-1-15Z HYDRODYNAMIC

DAMPING VALUE = 0.050

VEN DIRECTION

DISK CURVE SET NO. 7

NOTE: READ IN ORDER: (1) 100-100-1, (2) 100-100-2, (3) 100-100-3, (4) 100-100-4, (5) 100-100-5, (6) 100-100-6, (7) 100-100-7, (8) 100-100-8, (9) 100-100-9, (10) 100-100-10, (11) 100-100-11, (12) 100-100-12, (13) 100-100-13, (14) 100-100-14, (15) 100-100-15, (16) 100-100-16, (17) 100-100-17, (18) 100-100-18, (19) 100-100-19, (20) 100-100-20, (21) 100-100-21, (22) 100-100-22, (23) 100-100-23, (24) 100-100-24, (25) 100-100-25, (26) 100-100-26, (27) 100-100-27, (28) 100-100-28, (29) 100-100-29, (30) 100-100-30, (31) 100-100-31, (32) 100-100-32, (33) 100-100-33, (34) 100-100-34, (35) 100-100-35, (36) 100-100-36, (37) 100-100-37, (38) 100-100-38, (39) 100-100-39, (40) 100-100-40, (41) 100-100-41, (42) 100-100-42, (43) 100-100-43, (44) 100-100-44, (45) 100-100-45, (46) 100-100-46, (47) 100-100-47, (48) 100-100-48, (49) 100-100-49, (50) 100-100-50, (51) 100-100-51, (52) 100-100-52, (53) 100-100-53, (54) 100-100-54, (55) 100-100-55, (56) 100-100-56, (57) 100-100-57, (58) 100-100-58, (59) 100-100-59, (60) 100-100-60, (61) 100-100-61, (62) 100-100-62, (63) 100-100-63, (64) 100-100-64, (65) 100-100-65, (66) 100-100-66, (67) 100-100-67, (68) 100-100-68, (69) 100-100-69, (70) 100-100-70, (71) 100-100-71, (72) 100-100-72, (73) 100-100-73, (74) 100-100-74, (75) 100-100-75, (76) 100-100-76, (77) 100-100-77, (78) 100-100-78, (79) 100-100-79, (80) 100-100-80, (81) 100-100-81, (82) 100-100-82, (83) 100-100-83, (84) 100-100-84, (85) 100-100-85, (86) 100-100-86, (87) 100-100-87, (88) 100-100-88, (89) 100-100-89, (90) 100-100-90, (91) 100-100-91, (92) 100-100-92, (93) 100-100-93, (94) 100-100-94, (95) 100-100-95, (96) 100-100-96, (97) 100-100-97, (98) 100-100-98, (99) 100-100-99, (100) 100-100-100



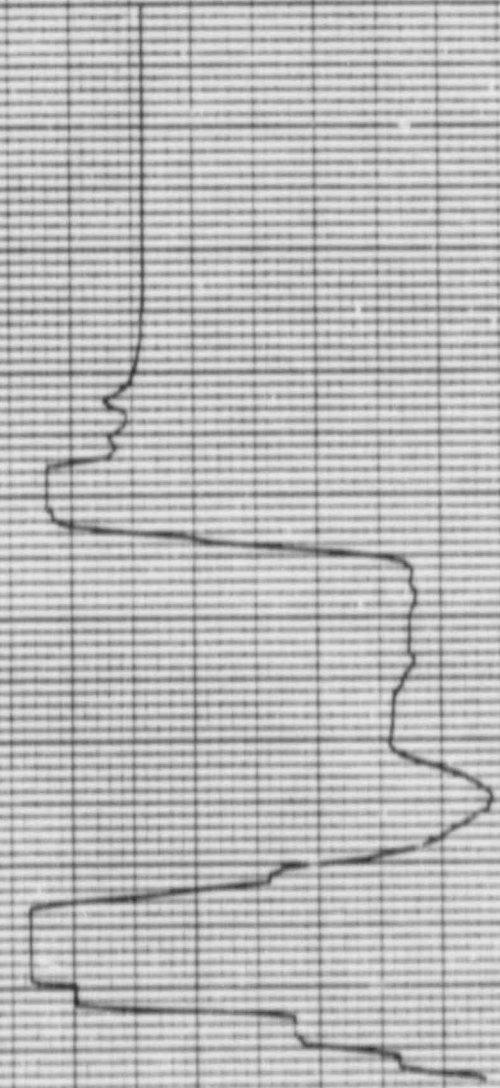
5 JUN 1965
JOB 22AB

PSPECTRA VER 01 LEV 09
GULF STATES UTILITIES-RMS UNIT 1-CALCULATED-MANUAL-1965-1965 REYNOLDS
RMS OF ACC-REACTOR BUILDING-EL-182-57-5555-50 SEIS MODEL-RPY
PERM SPREAD - ZONE-1-PSY SEISMIC-F-15Z HYDRODYNAMIC
DISK CURVE SET NO. 7

DAMPING VALUE = 0.040

VER DIRECTION
MTC, MASS IN 100-1000 LBS, 100-1000 HERTZ RANGE, 20 LBS, 0.01-0.10 HZ
RMS, 1.00-10.00, 100-1000, 100-1000, 100-1000, 100-1000, 100-1000, 100-1000

ACCELERATION 0 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00



10^0 10^1 10^2
FREQUENCY IN HZ

<p>337A</p> <p>9 FEB 1963</p> <p>6.875</p> <p>AMPLITUDE VALUE = 0.010</p>	<p>UPSET CONDITION</p> <p>NON DIRECTION</p>	<p>PSPECTRA PER 0.1 LEV DB</p> <p>GULF STATES UTILITIES-RBS UNIT 1-CALC122 0-MW C1-SAC-1963 REY111</p> <p>RMS OF ACC -REACTOR BLDG- EL#1 7-83 MASS-131 SEIS MODEL-APRINTERM</p> <p>PERM SPREAD -201.652 SEISMIC -152 HYDRODYNAMIC</p> <p>RISK CURVE SET 80.30</p> <p>BASED ON ACC COMBINATION 20 (BY MW C1) ON L 5-1220-01</p> <p>EXP. 1 30-11-0, (20-122-1) (20-1-0)</p>	<p>ACCELERATION</p> <p>0.80</p> <p>0.60</p> <p>0.40</p> <p>0.20</p> <p>0.00</p>	<p>FREQUENCY IN HZ</p> <p>0.1</p> <p>0.2</p> <p>0.3</p> <p>0.4</p> <p>0.5</p> <p>0.6</p> <p>0.7</p> <p>0.8</p> <p>0.9</p> <p>1.0</p> <p>1.1</p> <p>1.2</p> <p>1.3</p> <p>1.4</p> <p>1.5</p> <p>1.6</p> <p>1.7</p> <p>1.8</p> <p>1.9</p> <p>2.0</p> <p>2.1</p> <p>2.2</p> <p>2.3</p> <p>2.4</p> <p>2.5</p> <p>2.6</p> <p>2.7</p> <p>2.8</p> <p>2.9</p> <p>3.0</p> <p>3.1</p> <p>3.2</p> <p>3.3</p> <p>3.4</p> <p>3.5</p> <p>3.6</p> <p>3.7</p> <p>3.8</p> <p>3.9</p> <p>4.0</p> <p>4.1</p> <p>4.2</p> <p>4.3</p> <p>4.4</p> <p>4.5</p> <p>4.6</p> <p>4.7</p> <p>4.8</p> <p>4.9</p> <p>5.0</p> <p>5.1</p> <p>5.2</p> <p>5.3</p> <p>5.4</p> <p>5.5</p> <p>5.6</p> <p>5.7</p> <p>5.8</p> <p>5.9</p> <p>6.0</p> <p>6.1</p> <p>6.2</p> <p>6.3</p> <p>6.4</p> <p>6.5</p> <p>6.6</p> <p>6.7</p> <p>6.8</p> <p>6.9</p> <p>7.0</p> <p>7.1</p> <p>7.2</p> <p>7.3</p> <p>7.4</p> <p>7.5</p> <p>7.6</p> <p>7.7</p> <p>7.8</p> <p>7.9</p> <p>8.0</p> <p>8.1</p> <p>8.2</p> <p>8.3</p> <p>8.4</p> <p>8.5</p> <p>8.6</p> <p>8.7</p> <p>8.8</p> <p>8.9</p> <p>9.0</p> <p>9.1</p> <p>9.2</p> <p>9.3</p> <p>9.4</p> <p>9.5</p> <p>9.6</p> <p>9.7</p> <p>9.8</p> <p>9.9</p> <p>10.0</p>
---	---	---	---	---



5 JUN 1988

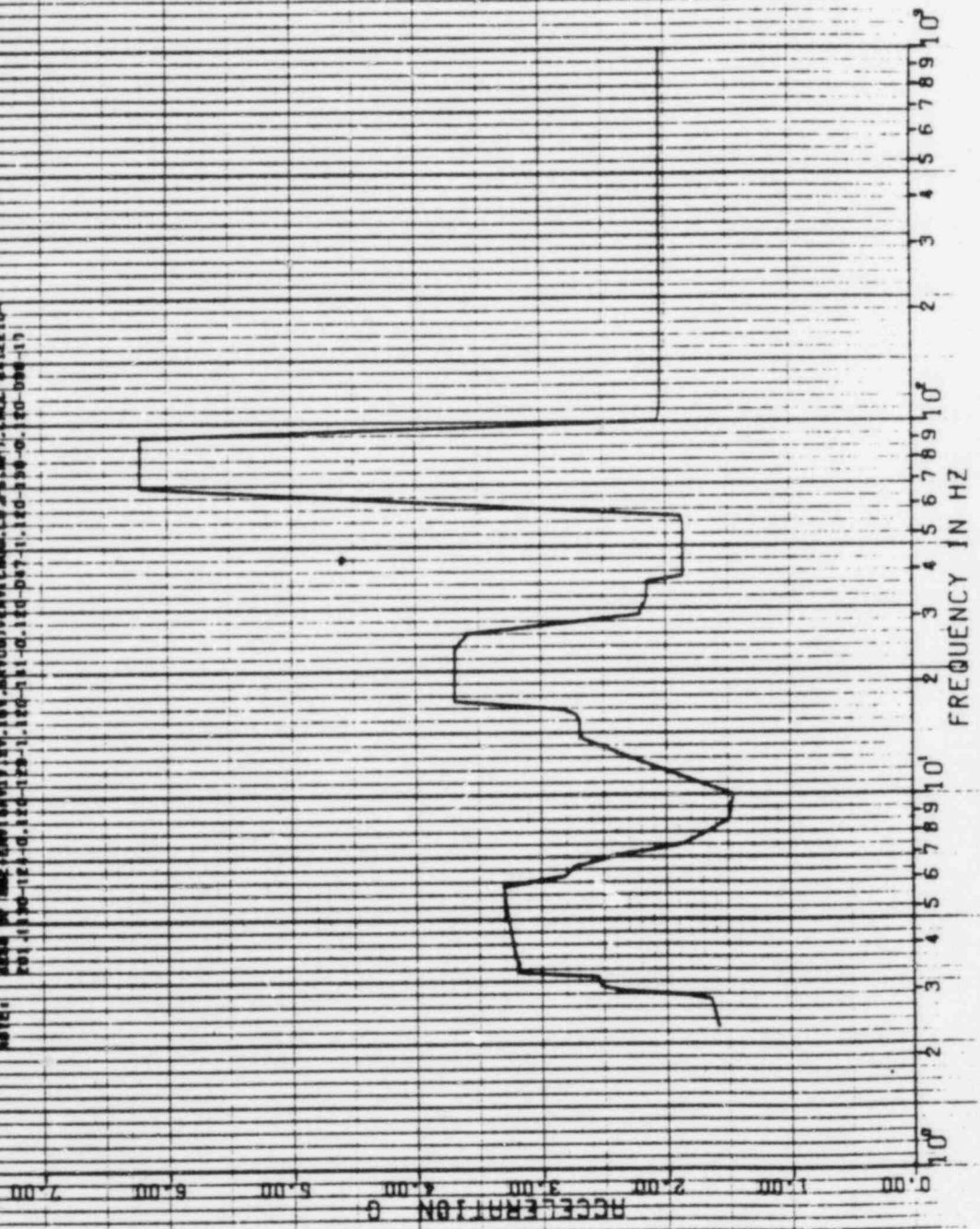
928A

JOB 1671

DAMPING VALUE = 0.000 0.02

P SPECTRA VER 01 LEV 08
 DULF STATES UNIT 1 - CALC 12210-NMCT-50E-1909 REV 120
 RES OF REC - REACTOR BLDG - ELEV=117.69-MASS=51 SETS MODEL-RPV (INTERN)
 PEAK SPREAD - 20Z - 25Z SEISMIC - 15% HYDRODYNAMIC
 DISK CURVE SET NO. 8
 FRUATED CONDITION
 NDK DIRECTION

Note: Data for 1002-00010000, EV. 10N, Model: (M)MCMC, CO. 20, 001, CMAC, 0412210-
 201, 0330-1123-G, 1120-1129-1, 120-11, 0, 120-087-1, 120-130-0, 120-088-11)



5 JUN 1983
JDB P2ND
DAMPING VALUE = 0.000

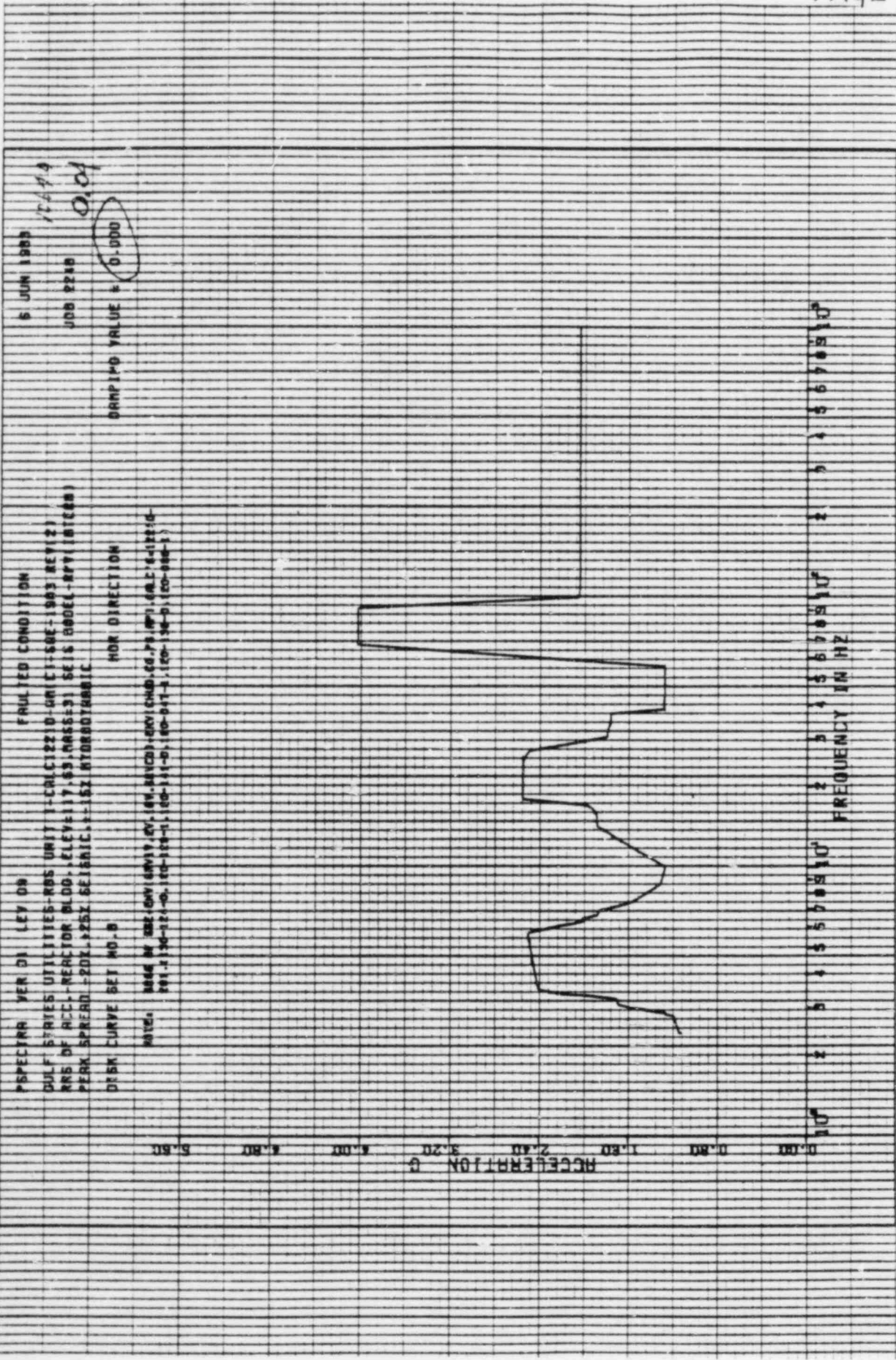
PSPECTR VER 03 (LEV 08) FAULTED CONDITION
DULF STATES UTILITIES-RBS UNIT 1-CALC12210-UMC1-50E-1983 REV12)
RMS OF ACC-REACTOR BLDG, ELEV 17.69, MASS 591 SEIS MODEL-RPV (ITC88)
PEAK SPREAD -20L-25Z GEISALIC, 2-15Z HYDROBOTTABIC

DISK CURVE SET NO. 8 MDR DIRECTION

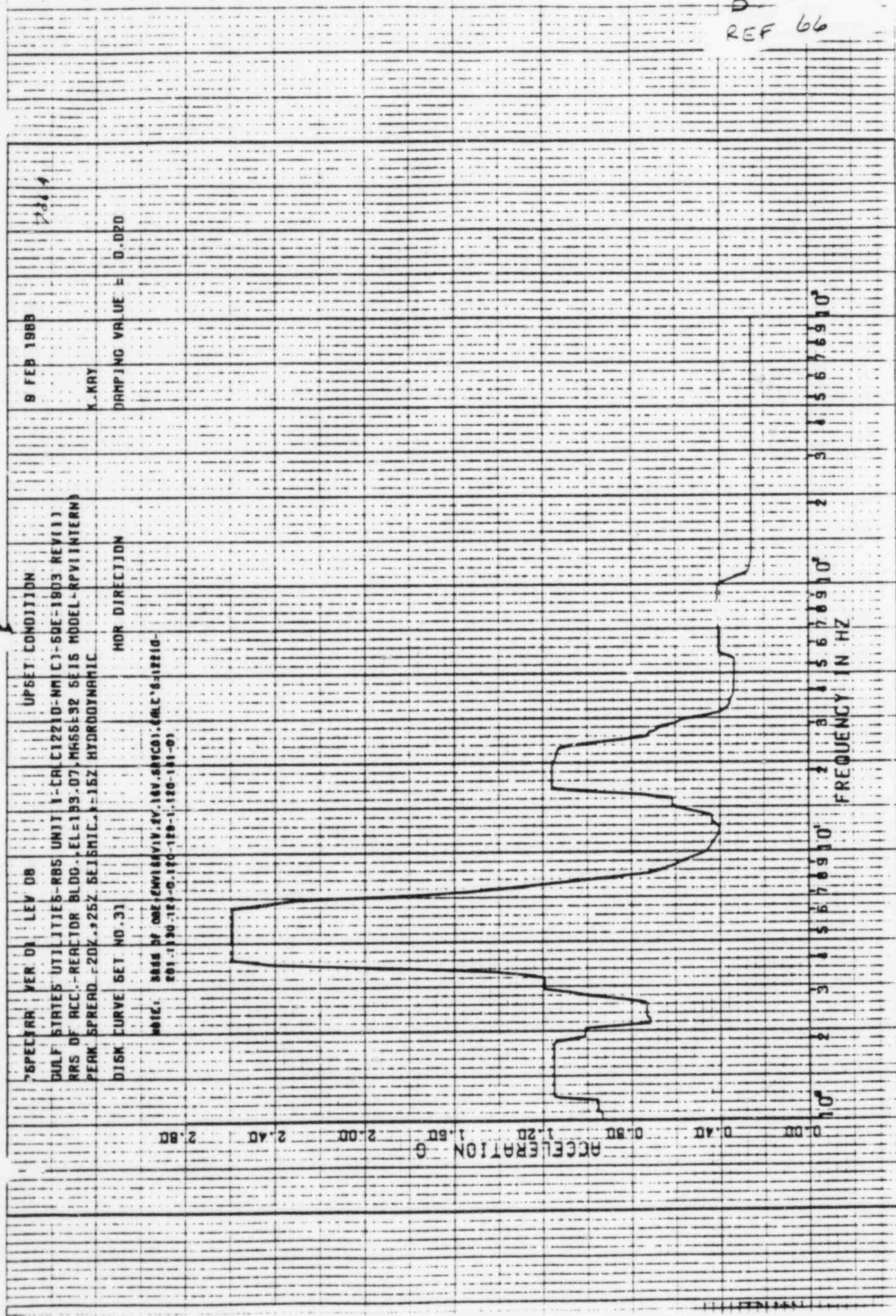
NOTE: MADE BY 002-10M1 00V19, CV, (BY 81VCD)-20V1CHAD, CD, P9, MPJ, (MLT '6-12210-
201-130-221-0, 100-100-1, 100-111-0, 100-017-1, 100-130-0, 100-000-1)

ACCELERATION G

FREQUENCY IN HZ



D
REF 66



9 FEB 1988
K. KRY
DAMPING VALUE = 0.020

UPSET CONDITION
HOR DIRECTION

76PECFRR VER 01 LEV 08
DULF STATES UTILITIES-RBS UNIT 1-CALC12210-WM(C)-SDE-1903 REV111
RRS OF ACC.-REACTOR BLDG., EL=195.07, MASS=32 5E15 MODEL-RV1 INTERM
PEAK SPREAD = 20% ± 25% SEISMIC. ± 15% HYDRODYNAMIC
DISK CURVE SET NO. 31

NOTE: BASE OF ONE ENVIROVIV.DV.16V.SRVC01.(CALC*6-12210-
001-130-12)-0.110-129-1-120-141-0)

2.00
2.00
1.50
1.00
0.50
0.00

10⁰
10¹
10²
10³
10⁴
10⁵
10⁶

PSPECTRA VER D1 LEV 08

UPSET CONDITION

9 FEB 1989

7821

GULF STATES UTILITIES-RBS UNIT 1-CALC(12210-NM(C)-SQE-1903 REV11)
RRS OF ACC.-REACTOR BLDG., EL-199.07, MASS-92 SE16 MODEL-RPV(INTERN)
PEAK SPREAD -20% .25% SEISMIC .4-15% HYDRODYNAMIC

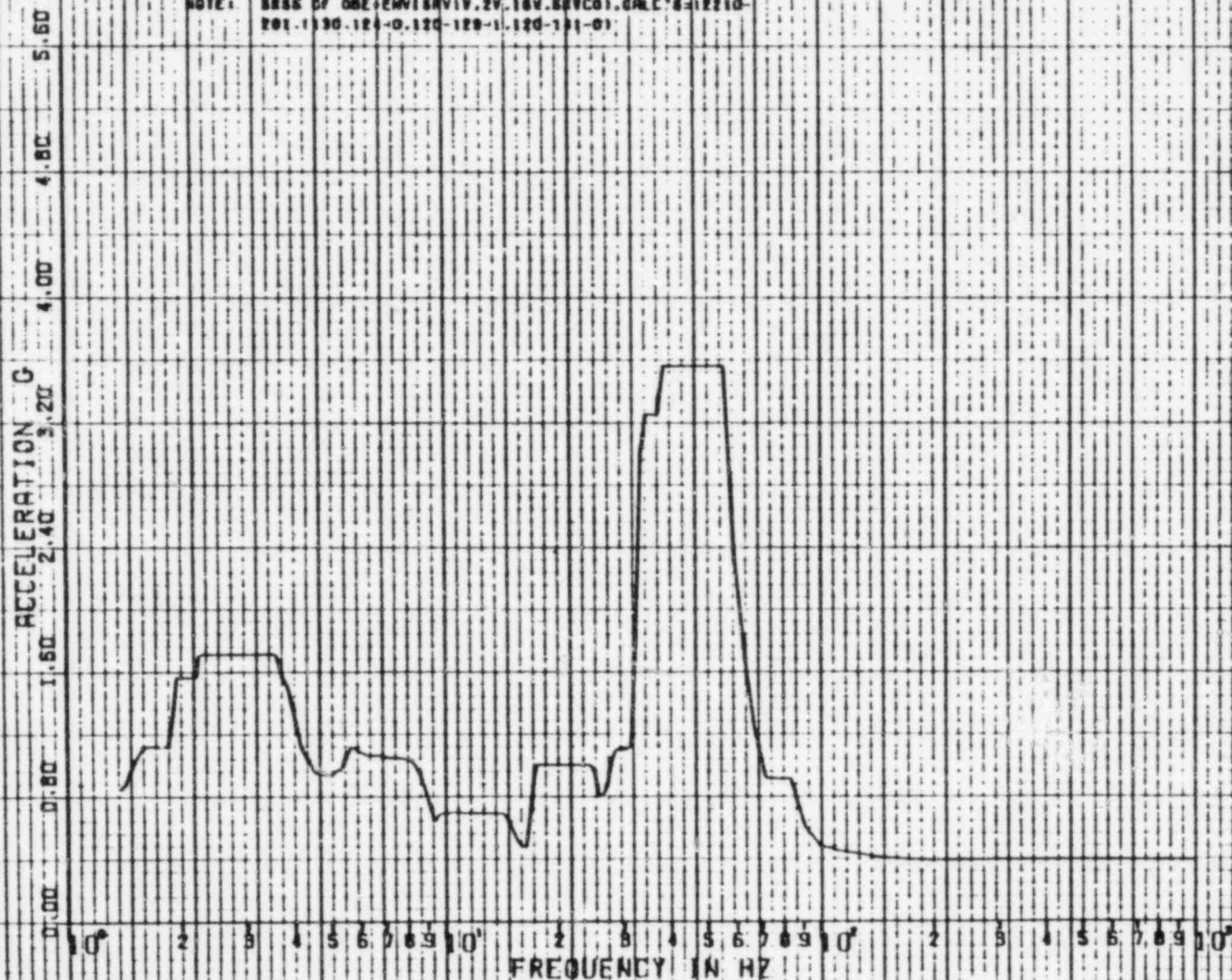
K.KAY

DISK CURVE SET NO.31

VER. DIRECTION

DAMPING VALUE = 0.020

NOTE: BASE OF ONE-ENVELOPE VIV. 2V. 18V. 50V(CO). CALC'S-12210-
FOR 1.130-1.24-0.120-1.20-1.120-1.11-01



REF 66
1

5 JUN 1963

930A

JOB 1671

0.02

DAMPING VALUE = 0.000

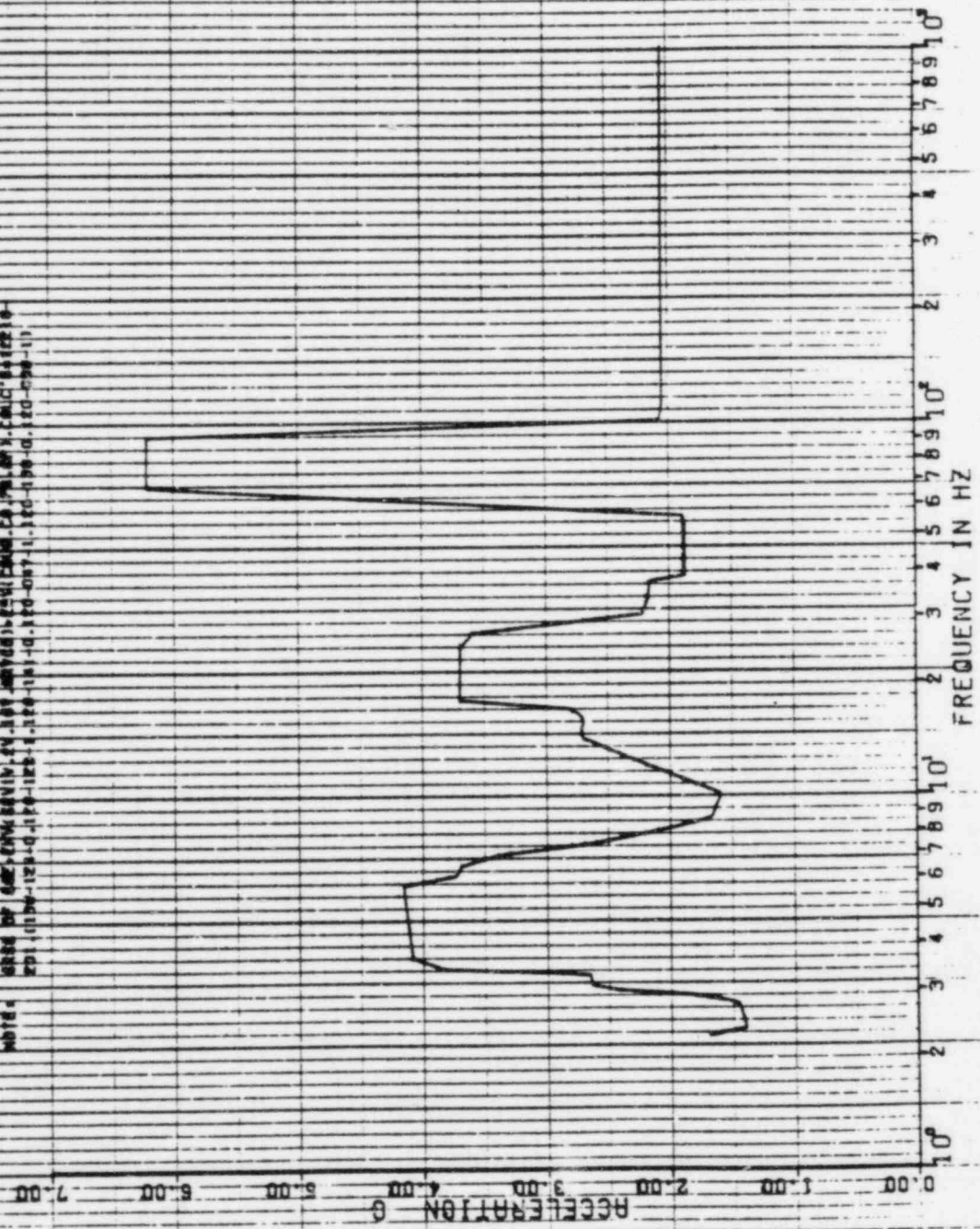
SPECTRUM VER 10 LEV 09
 DULF STATES UTILITIES-RBS UNIT 3-CALC 12210-NM1 C1-52E-1903 REV127
 RPS OF REC.-REACTOR BLDG.-ELEV=155.07-MR65-52 5E16 MODEL-RPVI (INTERN)
 PEAK SPREAD -211.4-252 6E16AIC.4-162 HYDRODYNAMIC

FRACTIONATED CONDITION

MARK DIRECTION

DISK CURVE SET NO. 9

NOTE: BASE OF 605-2004 REV14.4V.100 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000
 201.0130-128-d.110-128-1.100-111-10.100-007-1.100-000-d.100-000-11)



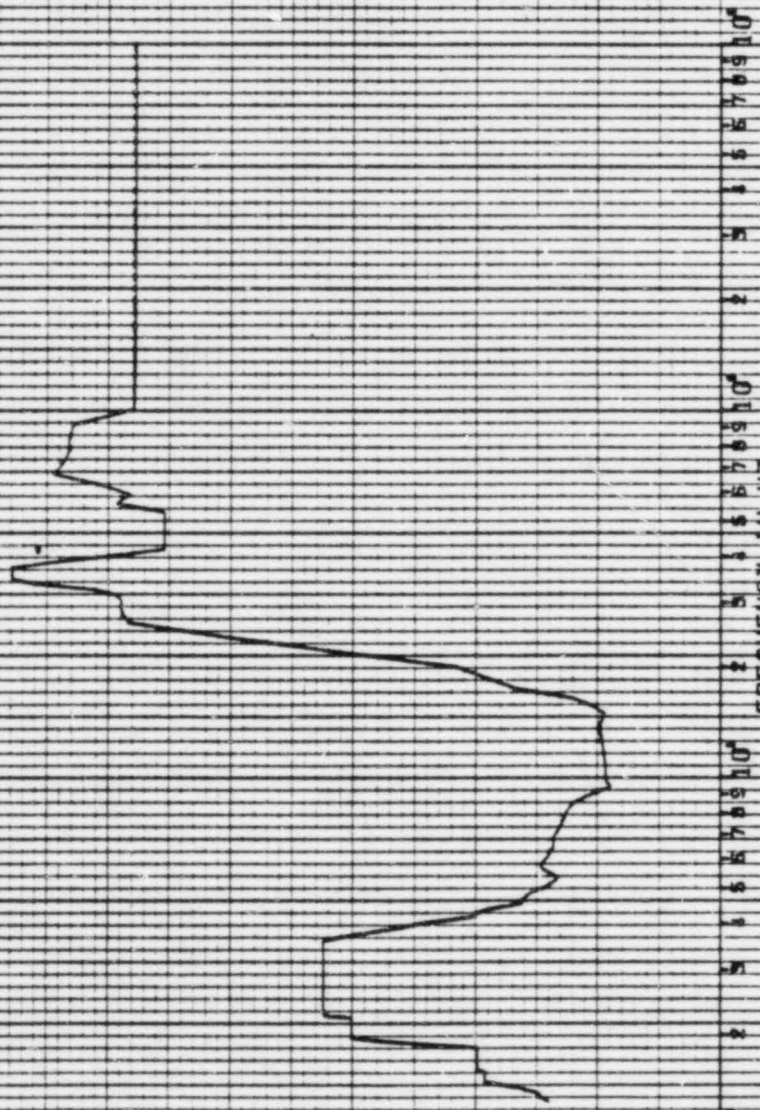
6 JUN 1968
JOB 2226
DAMPING VALUE = 0.000

PROBLEM VER 00 LEV 08
DAF STATES UTILITIES-RMS UNIT 1-CALCIPID-MNIC)-39E-1908 REV123
RMS OF ACC.-REACTOR BLDG.-ELEV-193.07-MR55-92 SENS MODEL-RPV1 INTERWJ
PERK SPREAD -20K--75K SEISMIC--15Z HYDRODYNAMIC
DISK CURVE SET NO. 0

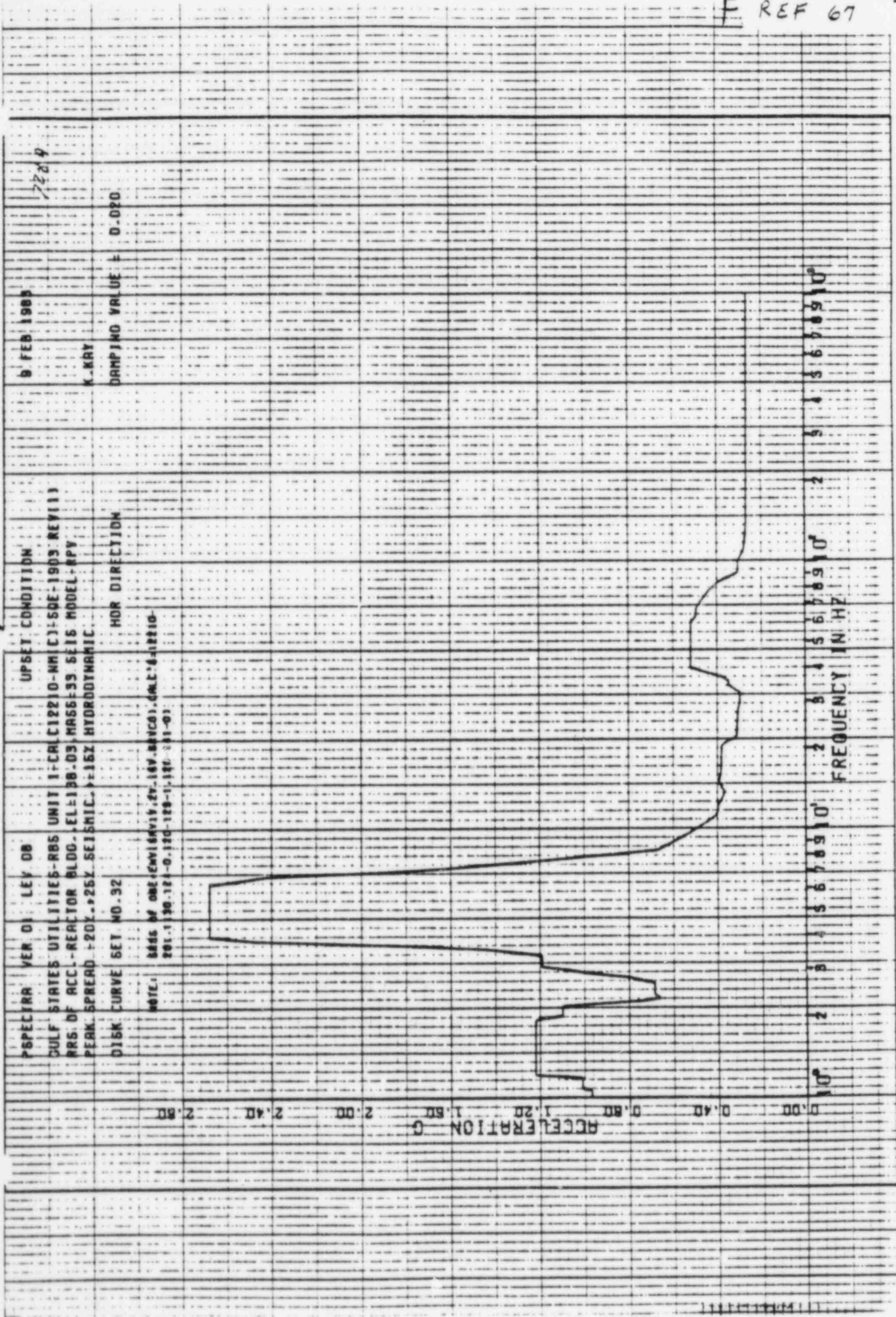
VER DIRECTION

NOTE: DATA BY 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

ACCELERATION 0 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00



10^0 2 5 1 5 6 7 8 9 10^1 2 5 1 5 6 7 8 9 10^2 2 5 1 5 6 7 8 9 10^3 2 5 1 5 6 7 8 9 10^4



7224

9 FEB 1969

K. RAY

DAMPING VALUE = 0.020

5.676910⁰

5.676910⁰

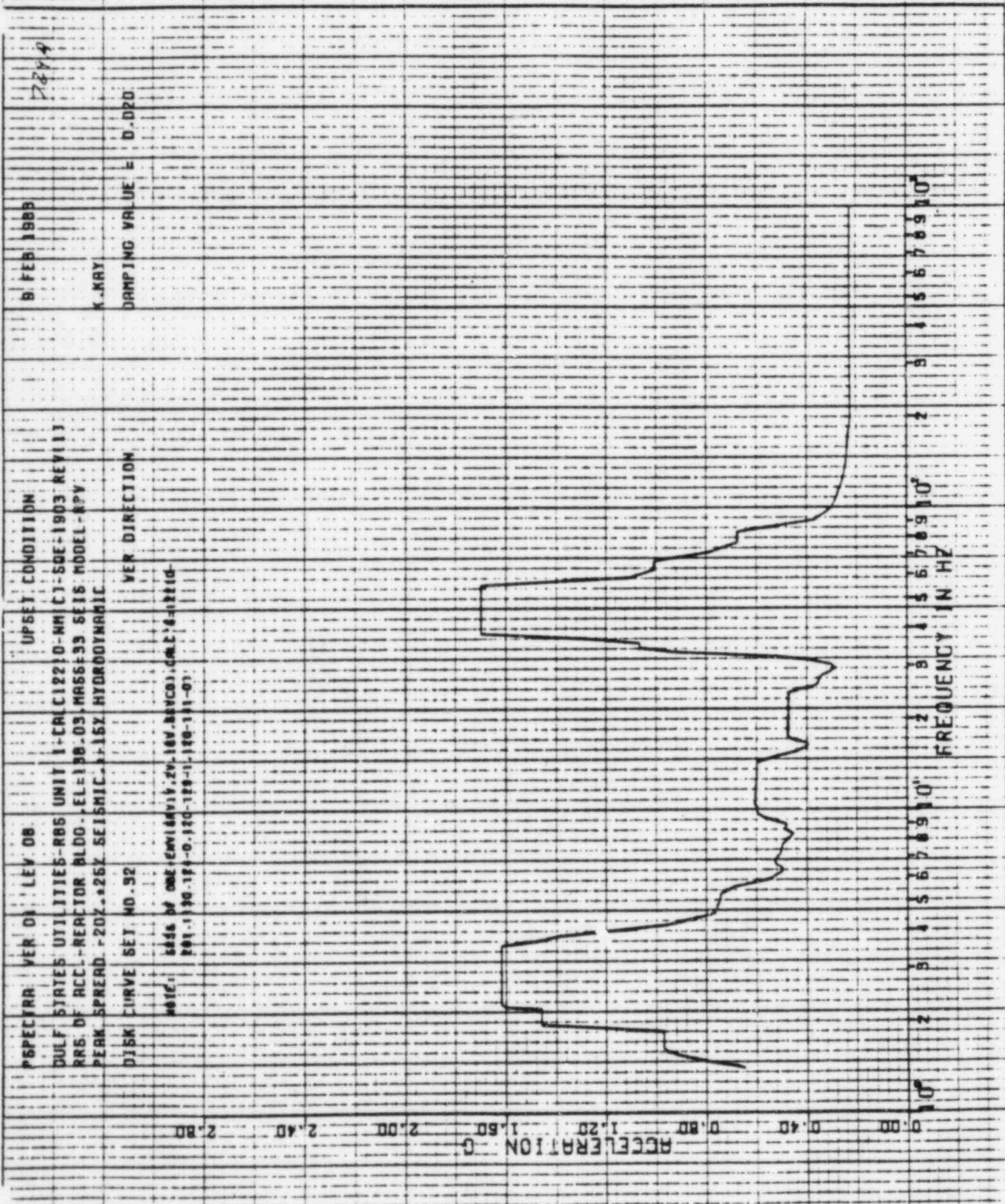
5.676910⁰

5.676910⁰

FREQUENCY IN HZ

ACCELERATION G

|||||



7244

B. FEB 1989

K. MAY

DAMPING VALUE = 0.020

POPECTRA VER 01 LEV 08
 DULF STAYES UTILITIES-R66 UNIT 1-CALC12210-NM CT-SQE-1903-REV113
 RRS OF ACC-L-REACTOR BLDG. LEL-198-09, MASS-99, SLE16, MODEL-NPV
 PEAK SPREAD - 20% ± 25% SEISMIC - 15% HYDRODYNAMIC
 DISK CURVE SET NO. 32

VER DIRECTION

NOTE: base of one (vertical) 27.16V. BEYCOI. ON L' 6-11216
 201.130.124-0.110-128-11.110-131-01

5.676910⁰

5.676910⁰

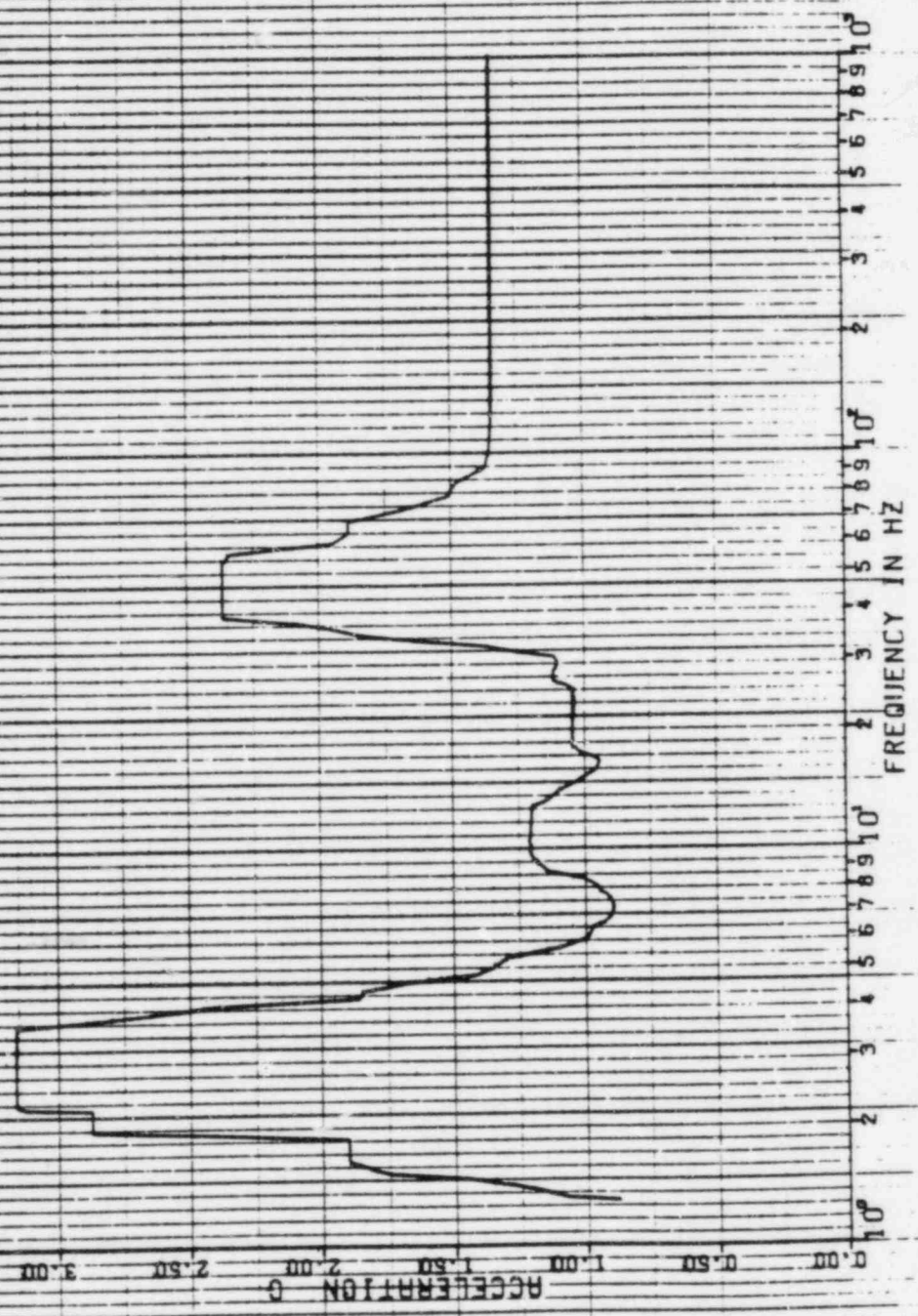
5.676910⁰

5.676910⁰

5 JUN 1965
9 2 3 4
JOB 1571

DRAWING VALUE = 0.020

SPECTRA VER 08 LEV 08
 DULF STATES UTILITIES-RBS UNIT 1-CALC 12210-NM1C3-5DE-1808 REV12J
 RRS OF REC-REACTOR BLDG.-EL-308-08-MR55-08 SE16 MODEL-RPV
 PERK SPREAD-20Z-25Z SEISMIC-15Z HYDRODYNAMIC
 DISK CURVE SET NO-1D
 VER DIRECTION
 NOTE: WORK OF AME-DIVISION BY JAMES H. HARRIS, JR. ON 11/20/64. CALC. BY J. H. HARRIS, JR. ON 11/20/64.



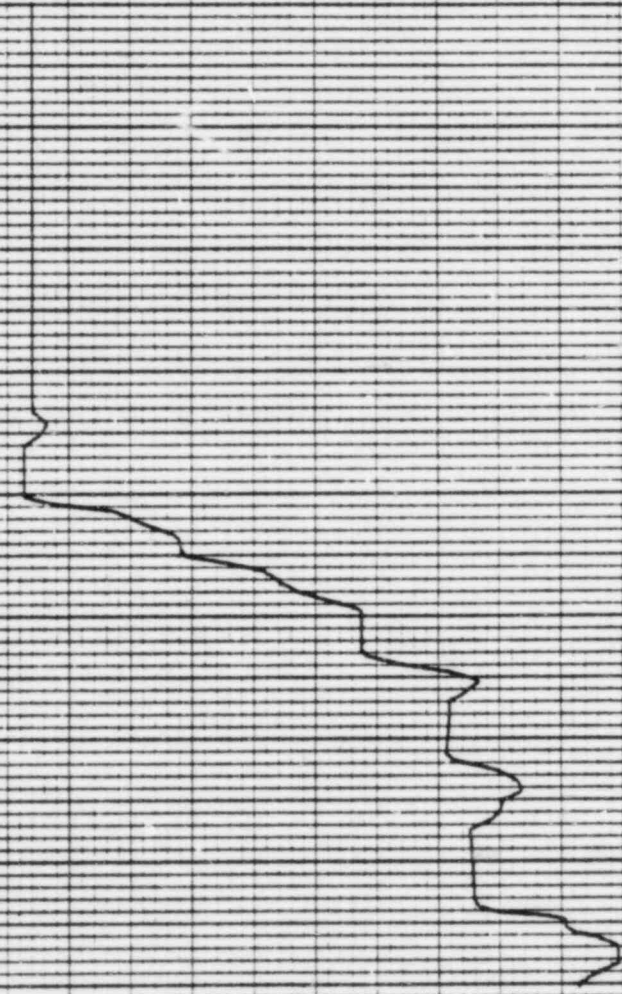
5 JUN 1955
JOB P256
DAMPING VALUE = 0.050

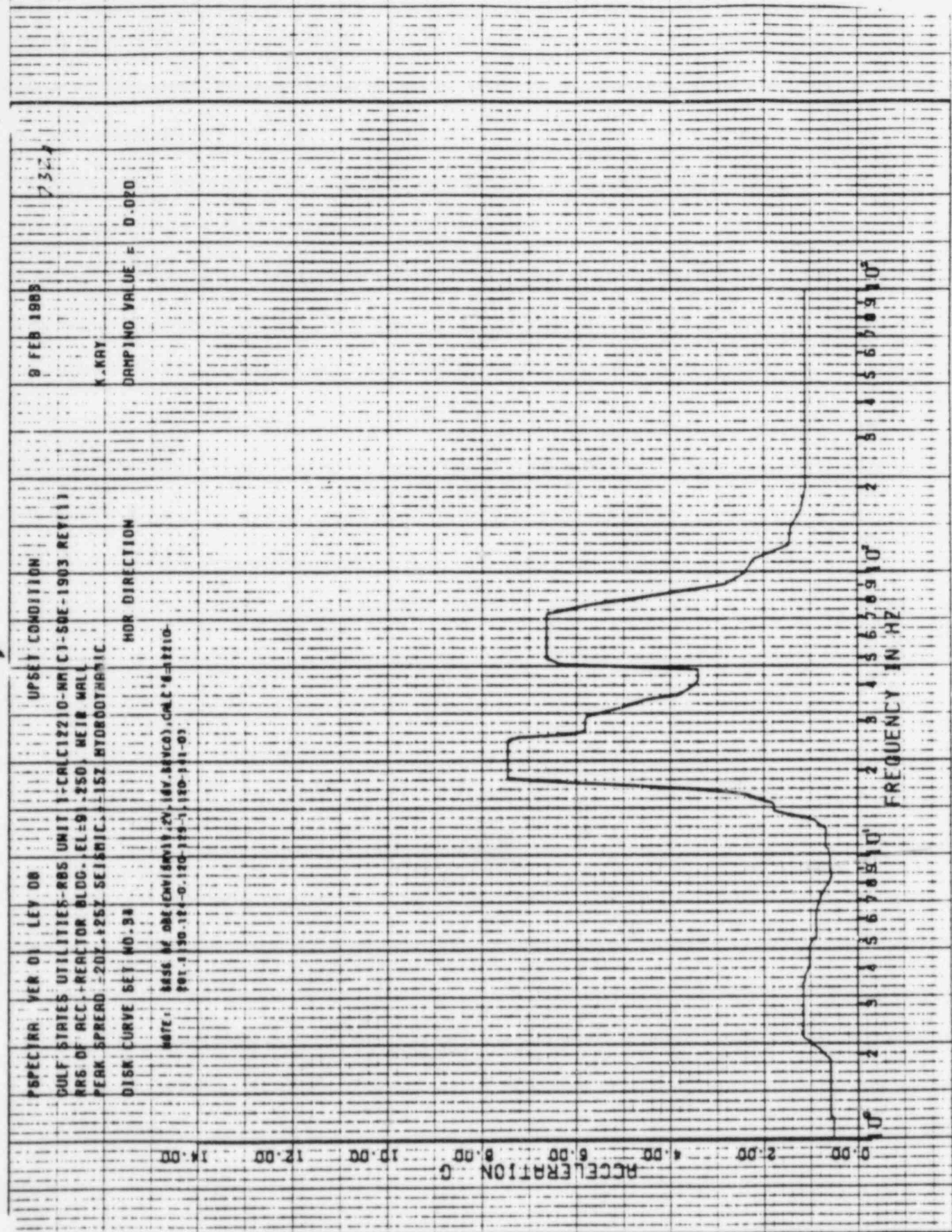
FAULTED CONDITION
SPECTRA VER 01 LEV 08
DULF STATES UTILITIES-RBS UNIT 1-CALC 12210-NM1C3-50E-1909 REV12
RBS OF ACC-REACTOR BLDG., EL-198-03, MASS-35, SEIS MODEL-RPV
PEAK SPEED - 20X SEISMIC - 15% HYDRODYNAMIC
DISK CURVE SET NO. 10
HOR DIRECTION

NOTE: MADE BY ANDREW GARY, EV. 164, BAYCO, PHYSICUS CO. 73, 6P. (CALC 6412210-
PV 1 130-121-0-100-329-1-100-311-0-100-957-1-100-198-0-100-094-19)

ACCELERATION G
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
13.00
14.00

10⁰
2 5 4 5 5 7 9 10⁰
2 5 4 5 5 7 9 10⁰
2 5 4 5 6 7 9 10⁰
FREQUENCY IN HZ





7327

9 FEB 1983

K. KAY

DAMPING VALUE = 0.020

UPSET CONDITION:

CALC 12210-NM CI-SOE-1903 REV 111
UNIT 1-CALC 12210-NM CI-SOE-1903 REV 111
RRG OF ACC. REACTOR BLDG., EL. 59.250 WEIR WALL
PEAK SPREAD: 207-1257 SEISMIC: 15Z HYDRODYNAMIC

HOR DIRECTION

DISK CURVE SET NO. 34
NOTE: BASE AT 0.00 (CH/BRV11, 2V, 14V, 24VCO), CMT # 6-11210-
POT. 1 130-184-0-120-110-1, 130-111-03

SPECTRA VER 01 LEY 08

CULT STATES UTILITIES-RBS UNIT 1-CALC 12210-NM CI-SOE-1903 REV 111
RRG OF ACC. REACTOR BLDG., EL. 59.250 WEIR WALL
PEAK SPREAD: 207-1257 SEISMIC: 15Z HYDRODYNAMIC

DISK CURVE SET NO. 34

NOTE: BASE AT 0.00 (CH/BRV11, 2V, 14V, 24VCO), CMT # 6-11210-
POT. 1 130-184-0-120-110-1, 130-111-03

SPECTRA VER 01 LEY 08

CULT STATES UTILITIES-RBS UNIT 1-CALC 12210-NM CI-SOE-1903 REV 111
RRG OF ACC. REACTOR BLDG., EL. 59.250 WEIR WALL
PEAK SPREAD: 207-1257 SEISMIC: 15Z HYDRODYNAMIC

DISK CURVE SET NO. 34

NOTE: BASE AT 0.00 (CH/BRV11, 2V, 14V, 24VCO), CMT # 6-11210-
POT. 1 130-184-0-120-110-1, 130-111-03

SPECTRA VER 01 LEY 08

CULT STATES UTILITIES-RBS UNIT 1-CALC 12210-NM CI-SOE-1903 REV 111
RRG OF ACC. REACTOR BLDG., EL. 59.250 WEIR WALL
PEAK SPREAD: 207-1257 SEISMIC: 15Z HYDRODYNAMIC

DISK CURVE SET NO. 34

NOTE: BASE AT 0.00 (CH/BRV11, 2V, 14V, 24VCO), CMT # 6-11210-
POT. 1 130-184-0-120-110-1, 130-111-03

SPECTRA VER 01 LEY 08

CULT STATES UTILITIES-RBS UNIT 1-CALC 12210-NM CI-SOE-1903 REV 111
RRG OF ACC. REACTOR BLDG., EL. 59.250 WEIR WALL
PEAK SPREAD: 207-1257 SEISMIC: 15Z HYDRODYNAMIC

DISK CURVE SET NO. 34

NOTE: BASE AT 0.00 (CH/BRV11, 2V, 14V, 24VCO), CMT # 6-11210-
POT. 1 130-184-0-120-110-1, 130-111-03

737

9 FEB 1983

K. RAY

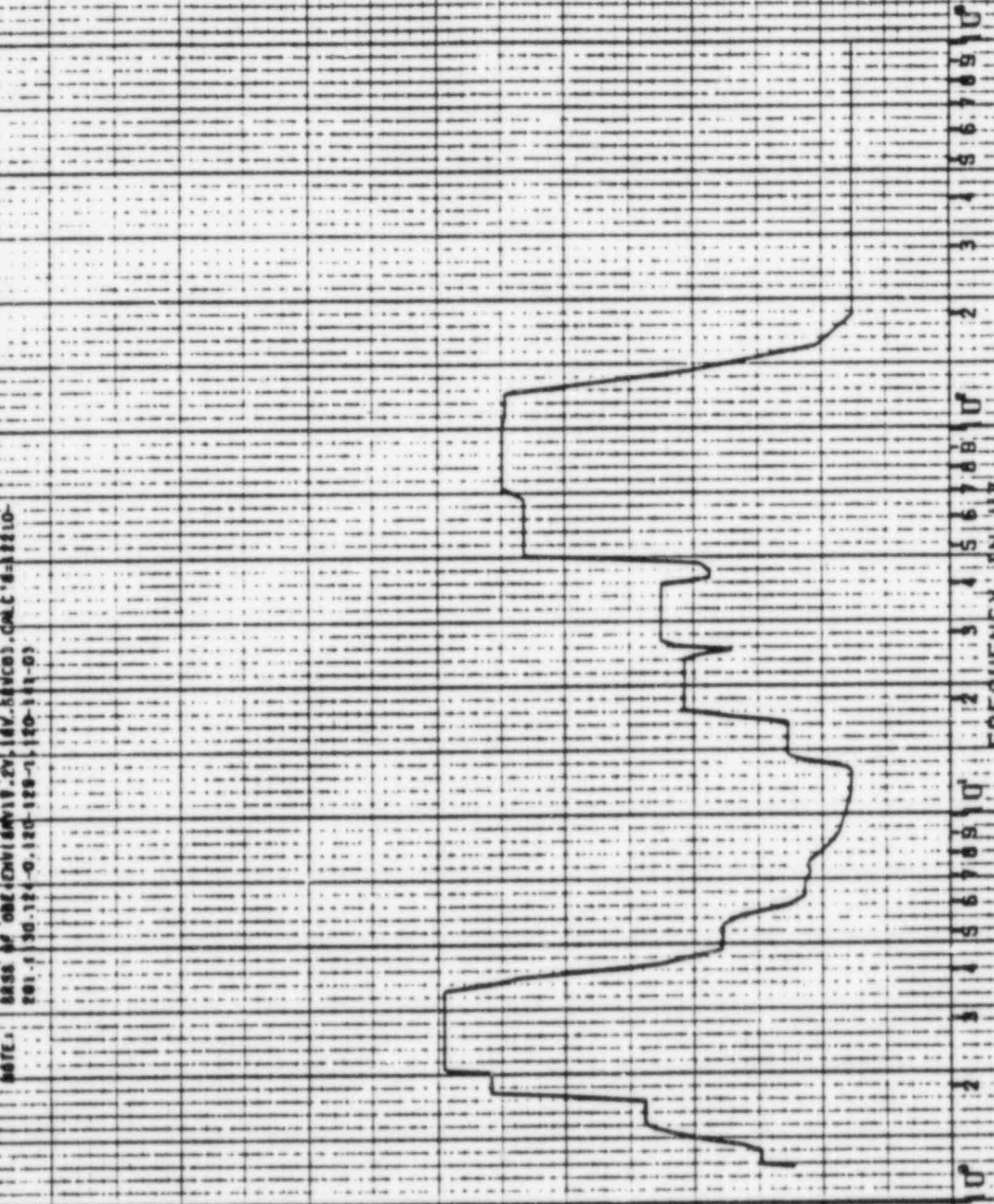
DAMPING VALUE = 0.020

PSPECTRA VER 01 LEV 08 UPSET CONDITION
 GULF STATES UTILITIES-RBS UNIT 1-CALC12210-RMCI-505-1903 REV111
 RMS OF ACC.-REACTOR BLOC. (EL-9) 1250. MEIN WALL
 PEAK SPREAD -207.125. SEISMIC. 152 HYDRODYNAMIC
 DISK CURVE SET NO.34 VER DIRECTION

NOTE: MASS OF ONE ENVI (M) 19.27, 16V. (M) 63. CALC. G. 1210
 201.1 30.124-0.120-128-1, 120-141-0)

ACCELERATION G

FREQUENCY IN HZ



937A

8 FEB 1963

K.KRY

DAMPING VALUE = 0.020

PHIL -- JN

PSPECTRA VER 01 LEV OR
DULF STATES UTILITIES-R65 UNIT 1-CALC12210-KK(C)-Spec-1903 REV111
R65 OF ACC.-REACTOR BLDG., EL=91.250, WEIR WALL
PEAK SPREAD -20Z. +25Z SEISMIC. -15Z HYDRODYNAMIC

VER DIRECTION

DISK CURVE SET NO.34

NOTE: R65 OF 002+20V16RV17.2V.16V.8EVC07+20V1CND8.C6.78.MP).CALC.4.12210
201.-1190-124-0.120-125-1.120-141-0.120-047-1.120-136-0.120-086-11

ACCELERATION G

FREQUENCY IN HZ

