

# Monticello (45.33° N, 93.83° E), Control Point Hazard

SA (g)	AFE 0.5 Hz	AFE 1 Hz	AFE 2.5 Hz	AFE 5 Hz	AFE 10 Hz	AFE 25 Hz	AFE 100 Hz
0.001000	2.515012e-03	3.212781e-03	4.083958e-03	4.224710e-03	4.219369e-03	4.138053e-03	3.815191e-03
0.001122	2.451948e-03	3.158899e-03	4.083129e-03	4.224698e-03	4.219354e-03	4.138053e-03	3.815191e-03
0.001259	2.383111e-03	3.063821e-03	4.072113e-03	4.224649e-03	4.219297e-03	4.138053e-03	3.815191e-03
0.001413	2.312983e-03	2.966623e-03	4.044392e-03	4.224480e-03	4.219112e-03	4.138053e-03	3.815191e-03
0.001585	2.241282e-03	2.868478e-03	4.003096e-03	4.223986e-03	4.218588e-03	4.138051e-03	3.815177e-03
0.001778	2.165892e-03	2.768868e-03	3.947716e-03	4.222749e-03	4.217266e-03	4.138027e-03	3.814877e-03
0.001995	2.087078e-03	2.667672e-03	3.880173e-03	4.220058e-03	4.213778e-03	4.137823e-03	3.811912e-03
0.002239	2.002548e-03	2.563991e-03	3.800348e-03	4.214839e-03	4.203219e-03	4.136466e-03	3.797692e-03
0.002512	1.912384e-03	2.457124e-03	3.707295e-03	4.205465e-03	4.180153e-03	4.128315e-03	3.758716e-03
0.002818	1.814717e-03	2.345684e-03	3.600426e-03	4.189441e-03	4.145992e-03	4.097731e-03	3.684217e-03
0.003162	1.710432e-03	2.229055e-03	3.479542e-03	4.163450e-03	4.100737e-03	4.037129e-03	3.571421e-03
0.003548	1.598733e-03	2.106148e-03	3.344507e-03	4.123982e-03	4.042119e-03	3.955959e-03	3.428444e-03
0.003981	1.480887e-03	1.976599e-03	3.195366e-03	4.068257e-03	3.968386e-03	3.859097e-03	3.266123e-03
0.004467	1.357676e-03	1.840179e-03	3.032232e-03	3.995274e-03	3.878612e-03	3.746485e-03	3.089753e-03
0.005012	1.230723e-03	1.697323e-03	2.855821e-03	3.905499e-03	3.772520e-03	3.618180e-03	2.901695e-03
0.005623	1.102389e-03	1.549246e-03	2.667272e-03	3.799209e-03	3.650472e-03	3.474924e-03	2.704428e-03
0.006310	9.744481e-04	1.397566e-03	2.468596e-03	3.676024e-03	3.513361e-03	3.317818e-03	2.500853e-03
0.007079	8.501157e-04	1.244893e-03	2.262410e-03	3.535646e-03	3.362466e-03	3.148517e-03	2.294126e-03
0.007943	7.317026e-04	1.093598e-03	2.052008e-03	3.378382e-03	3.199394e-03	2.969318e-03	2.087582e-03
0.008913	6.251011e-04	9.469253e-04	1.841060e-03	3.205270e-03	3.026052e-03	2.782965e-03	1.884553e-03
0.010000	5.269876e-04	8.074136e-04	1.633358e-03	3.018129e-03	2.844719e-03	2.592341e-03	1.688137e-03
0.011220	4.391122e-04	6.778429e-04	1.432687e-03	2.819528e-03	2.657862e-03	2.400295e-03	1.501019e-03
0.012589	3.611622e-04	5.598672e-04	1.242324e-03	2.612644e-03	2.468135e-03	2.209569e-03	1.325377e-03
0.014125	2.935608e-04	4.557713e-04	1.065119e-03	2.401041e-03	2.278128e-03	2.022629e-03	1.162811e-03
0.015849	2.354593e-04	3.678107e-04	9.030507e-04	2.188442e-03	2.090340e-03	1.841663e-03	1.014331e-03
0.017783	1.856194e-04	2.928975e-04	7.574753e-04	1.978492e-03	1.906994e-03	1.668440e-03	8.803621e-04
0.019953	1.435557e-04	2.299986e-04	6.288288e-04	1.774546e-03	1.730052e-03	1.504352e-03	7.608365e-04
0.022387	1.094196e-04	1.781276e-04	5.170317e-04	1.579487e-03	1.561097e-03	1.350362e-03	6.553414e-04
0.025119	8.227258e-05	1.362075e-04	4.214448e-04	1.395617e-03	1.401368e-03	1.207106e-03	5.631747e-04
0.028184	6.078824e-05	1.027573e-04	3.411407e-04	1.224603e-03	1.251730e-03	1.074852e-03	4.830324e-04
0.031623	4.424913e-05	7.661571e-05	2.744898e-04	1.067492e-03	1.112732e-03	9.535918e-04	4.130777e-04
0.035481	3.173254e-05	5.637301e-05	2.198292e-04	9.247719e-04	9.846056e-04	8.428726e-04	3.518545e-04
0.039811	2.248260e-05	4.089722e-05	1.753795e-04	7.964571e-04	8.673604e-04	7.410800e-04	2.987710e-04
0.044668	1.569737e-05	2.930085e-05	1.395117e-04	6.821822e-04	7.607838e-04	6.468857e-04	2.533376e-04
0.050119	1.082957e-05	2.083392e-05	1.107933e-04	5.812947e-04	6.645665e-04	5.618211e-04	2.146984e-04
0.056234	7.378097e-06	1.470711e-05	8.794550e-05	4.929259e-04	5.783622e-04	4.864685e-04	1.818917e-04
0.063096	4.985126e-06	1.033199e-05	6.983020e-05	4.160489e-04	5.015669e-04	4.200049e-04	1.540442e-04
0.070795	3.336248e-06	7.242403e-06	5.548090e-05	3.495651e-04	4.334759e-04	3.615305e-04	1.304029e-04
0.079433	2.225015e-06	5.086057e-06	4.411008e-05	2.924120e-04	3.733739e-04	3.102620e-04	1.103276e-04
0.089125	1.479018e-06	3.587470e-06	3.509095e-05	2.436074e-04	3.205223e-04	2.654855e-04	9.327636e-05
0.100000	9.864847e-07	2.547580e-06	2.793656e-05	2.022141e-04	2.742039e-04	2.265337e-04	7.879140e-05
0.112202	6.619245e-07	1.826858e-06	2.226209e-05	1.673200e-04	2.337608e-04	1.927820e-04	6.648343e-05
0.125893	4.485445e-07	1.324182e-06	1.776013e-05	1.380578e-04	1.986051e-04	1.636490e-04	5.598874e-05
0.141254	3.081935e-07	9.716807e-07	1.418467e-05	1.136299e-04	1.681980e-04	1.385960e-04	4.686660e-05
0.158489	2.149957e-07	7.208051e-07	1.134179e-05	9.331921e-05	1.420303e-04	1.171267e-04	3.869872e-05

0.177828	1.528856e-07	5.409772e-07	9.078301e-06	7.649111e-05	1.196150e-04	9.878343e-05	3.144061e-05
0.199526	1.105312e-07	4.097039e-07	7.273728e-06	6.258963e-05	1.004926e-04	8.313612e-05	2.528488e-05
0.223872	8.138495e-08	3.129496e-07	5.832326e-06	5.113173e-05	8.423685e-05	6.978093e-05	2.023092e-05
0.251189	6.072937e-08	2.408804e-07	4.678636e-06	4.170157e-05	7.045862e-05	5.836879e-05	1.610053e-05
0.281838	4.594455e-08	1.864659e-07	3.754232e-06	3.394613e-05	5.880943e-05	4.861822e-05	1.271598e-05
0.316228	3.506953e-08	1.446613e-07	3.012671e-06	2.757216e-05	4.897837e-05	4.029626e-05	9.940825e-06
0.354813	2.705312e-08	1.126103e-07	2.417419e-06	2.234260e-05	4.068722e-05	3.321252e-05	7.689629e-06
0.398107	2.107981e-08	8.779257e-08	1.939471e-06	1.806717e-05	3.369390e-05	2.721933e-05	5.897122e-06
0.446684	1.655534e-08	6.856783e-08	1.555353e-06	1.458545e-05	2.779743e-05	2.218743e-05	4.485811e-06
0.501187	1.301388e-08	5.362590e-08	1.246606e-06	1.175504e-05	2.283575e-05	1.798132e-05	3.379132e-06
0.562341	1.025340e-08	4.198764e-08	9.985090e-07	9.451874e-06	1.867564e-05	1.447566e-05	2.514238e-06
0.630957	8.081535e-09	3.293342e-08	7.991753e-07	7.574787e-06	1.520016e-05	1.157220e-05	1.846179e-06
0.707946	6.360832e-09	2.586335e-08	6.388826e-07	6.045853e-06	1.230520e-05	9.187532e-06	1.337837e-06
0.794328	5.001915e-09	2.031459e-08	5.096792e-07	4.804798e-06	9.902271e-06	7.243686e-06	9.565452e-07
0.891251	3.923971e-09	1.593769e-08	4.052392e-07	3.801922e-06	7.919363e-06	5.671749e-06	6.735621e-07
1.000000	3.067764e-09	1.243883e-08	3.205664e-07	2.994599e-06	6.296346e-06	4.410154e-06	4.664916e-07
1.122019	2.388773e-09	9.611095e-09	2.519592e-07	2.346563e-06	4.977131e-06	3.403023e-06	3.172450e-07
1.258925	1.848347e-09	7.329683e-09	1.968496e-07	1.827430e-06	3.907749e-06	2.602545e-06	2.116317e-07
1.412538	1.418276e-09	5.500348e-09	1.531832e-07	1.412453e-06	3.040927e-06	1.969718e-06	1.387579e-07
1.584893	1.078487e-09	4.063318e-09	1.189486e-07	1.082455e-06	2.339373e-06	1.473656e-06	8.946229e-08
1.778279	8.108368e-10	2.964794e-09	9.216853e-08	8.226600e-07	1.775002e-06	1.089357e-06	5.652185e-08
1.995262	6.011014e-10	2.145977e-09	7.113558e-08	6.204650e-07	1.326343e-06	7.950453e-07	3.475272e-08
2.238721	4.380282e-10	1.545087e-09	5.454110e-08	4.642627e-07	9.757128e-07	5.715131e-07	2.073252e-08
2.511886	3.133592e-10	1.106845e-09	4.143433e-08	3.441179e-07	7.069152e-07	4.030577e-07	1.190419e-08
2.818383	2.198157e-10	7.862691e-10	3.112480e-08	2.523801e-07	5.044290e-07	2.778196e-07	6.513038e-09
3.162278	1.606145e-10	5.818134e-10	2.401625e-08	1.920386e-07	3.742253e-07	2.000702e-07	3.978818e-09
3.548134	1.014133e-10	3.773578e-10	1.690769e-08	1.316971e-07	2.440217e-07	1.223208e-07	1.444598e-09

## Monticello (45.33° N, 93.83° E), Response Spectra

Frequency (Hz)	UHRS 1E-4 (g)	GMRS (g)	UHRS 1E-5 (g)
0.500000	0.023216	0.026279	0.051331
0.561009	0.023836	0.027016	0.052788
0.629463	0.024544	0.027838	0.054404
0.706269	0.025346	0.028779	0.056258
0.792447	0.026199	0.029845	0.058387
0.889140	0.027228	0.031101	0.060888
0.997631	0.028460	0.032535	0.063707
1.000000	0.028486	0.032565	0.063767
1.122019	0.029286	0.034382	0.067773
1.258925	0.030284	0.036699	0.072917
1.412538	0.031691	0.039716	0.079575
1.584893	0.033518	0.043515	0.087962
1.778279	0.035993	0.048643	0.099319
1.995262	0.039450	0.055633	0.114807
2.238721	0.044846	0.065918	0.137447
2.500000	0.052746	0.080392	0.169153
2.805046	0.066975	0.106198	0.225672

3.147313	0.086288	0.139687	0.298379
3.531344	0.107118	0.174991	0.374642
3.962233	0.126736	0.208177	0.446300
4.445698	0.140604	0.232572	0.499468
4.988156	0.152210	0.253688	0.545852
5.000000	0.152472	0.254174	0.546925
5.610092	0.154573	0.263477	0.570107
6.294627	0.154156	0.269158	0.585910
7.062688	0.155561	0.278891	0.611125
7.924466	0.163655	0.298708	0.657486
8.891397	0.179089	0.325428	0.715505
9.976312	0.199688	0.359434	0.788401
10.000000	0.200167	0.360265	0.790205
11.220185	0.211117	0.376887	0.824981
12.589254	0.218193	0.387602	0.847390
14.125375	0.218542	0.385377	0.840978
15.848932	0.211660	0.375579	0.820876
17.782794	0.203757	0.362639	0.793189
19.952623	0.190041	0.333175	0.726006
22.387211	0.176363	0.310988	0.678640
25.000000	0.168077	0.292543	0.636313
28.050461	0.159857	0.269696	0.582066
31.473135	0.153788	0.254166	0.545729
35.313439	0.150644	0.245700	0.525812
39.622330	0.147422	0.236115	0.503008
44.456985	0.143864	0.228045	0.484560
49.881558	0.140413	0.221030	0.468838
55.968028	0.134991	0.210862	0.446410
62.797161	0.128224	0.199263	0.421310
70.459573	0.120196	0.188355	0.399081
79.056942	0.111159	0.177037	0.376621
88.703347	0.101876	0.166403	0.356242
99.526793	0.093256	0.156884	0.338349
100.000000	0.084971	0.145560	0.315351