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Appendix-A

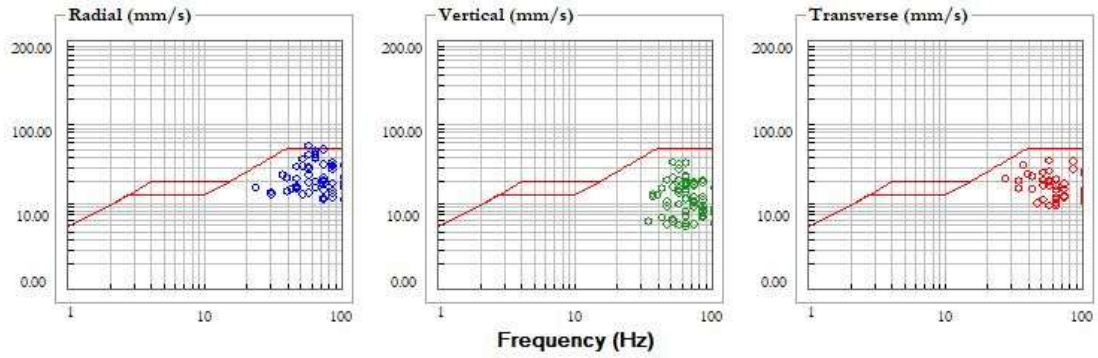


Figure 4.26 Frequency vs amplitude graph plotted at 100m distance.

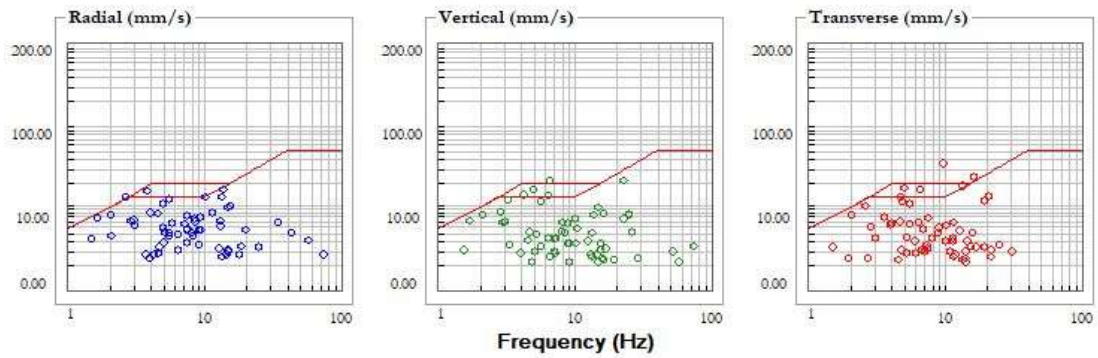


Figure 4.27 Frequency vs amplitude graph plotted at 150m distance.

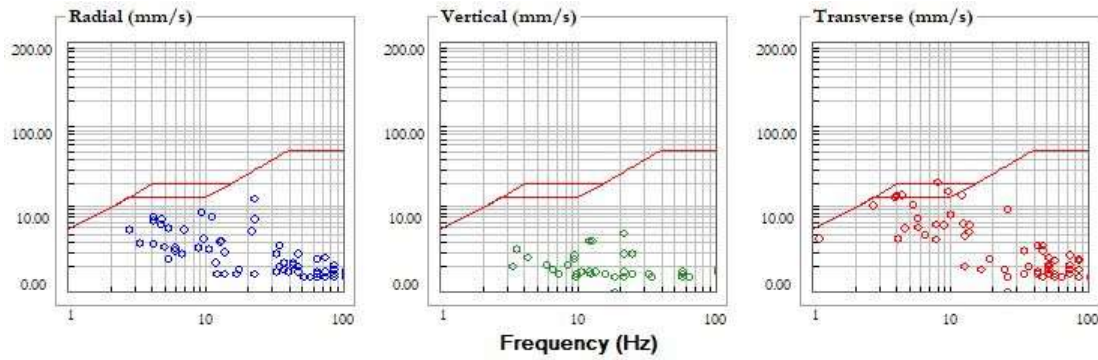


Figure 4.28 Frequency vs amplitude graph plotted at 200m distance.

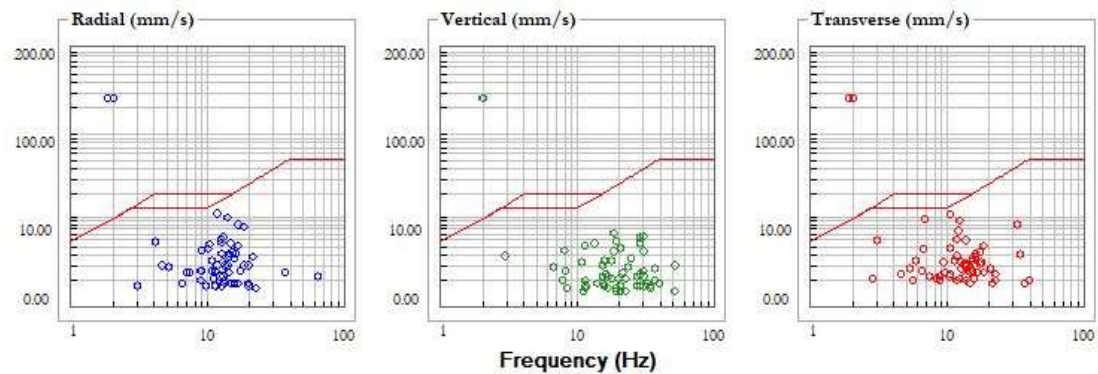


Figure 4.29 Frequency vs amplitude graph plotted at 250m distance.

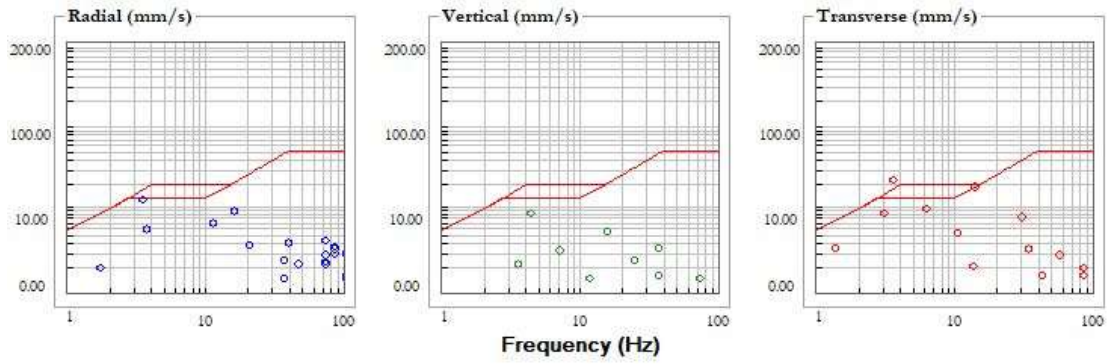


Figure 4.30 Frequency vs amplitude graph plotted at 300m distance.

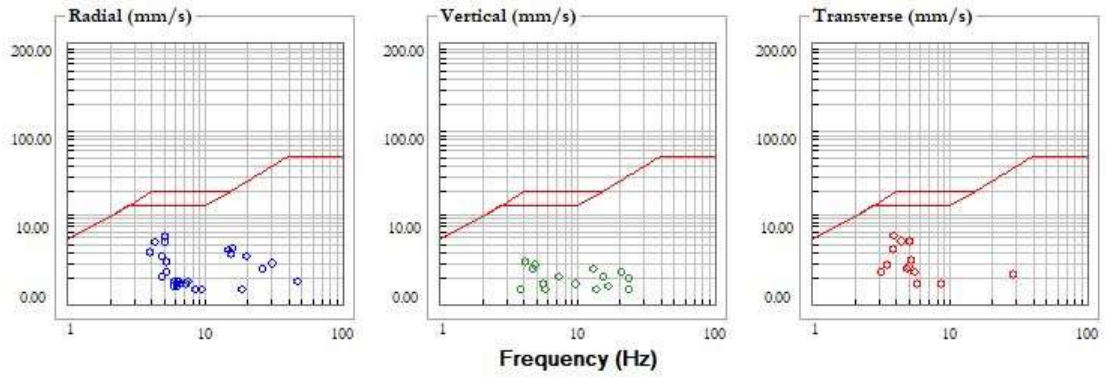


Figure 4.31 Frequency vs amplitude graph plotted at 350m distance.

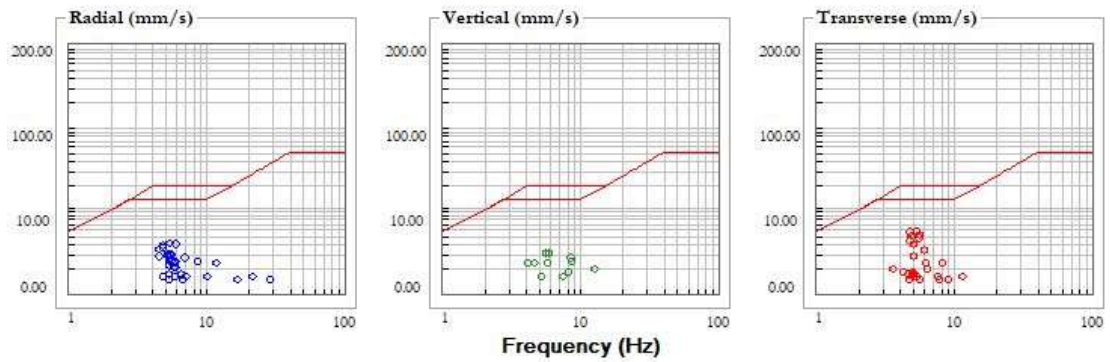


Figure 4.32 Frequency vs amplitude graph plotted at 400m distance.

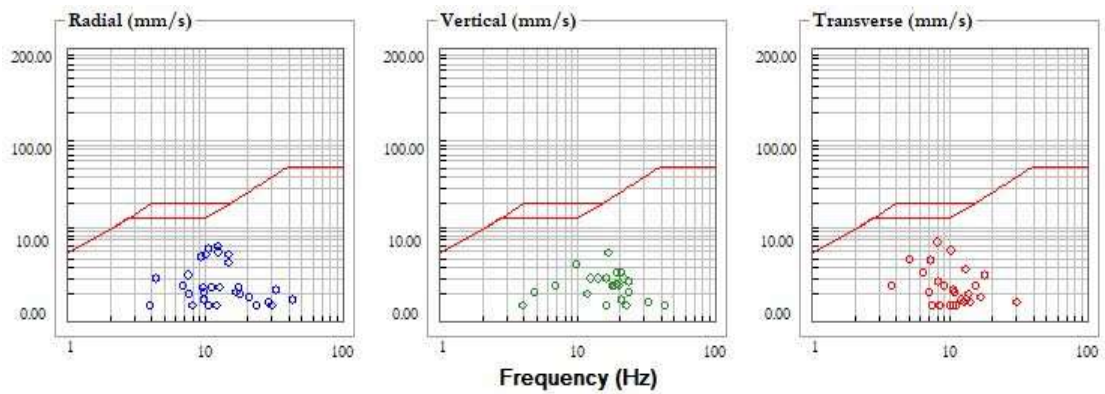


Figure 4.33 Frequency vs amplitude graph plotted at 450m distance.

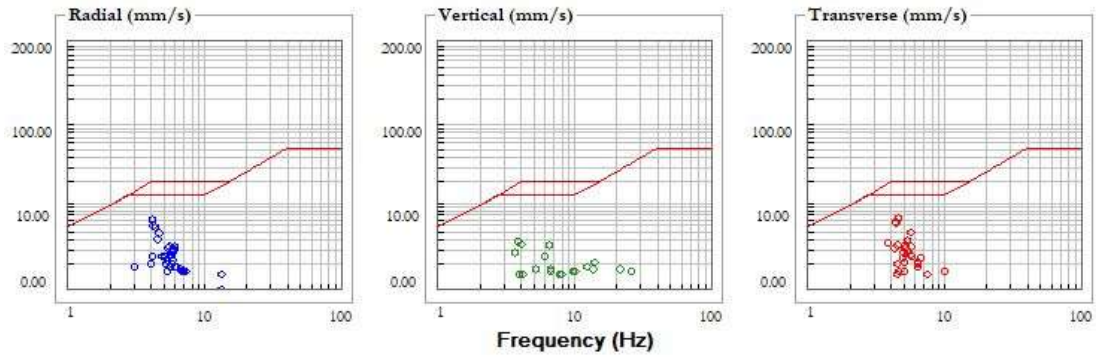


Figure 4.34 Frequency vs amplitude graph plotted at 500m distance.

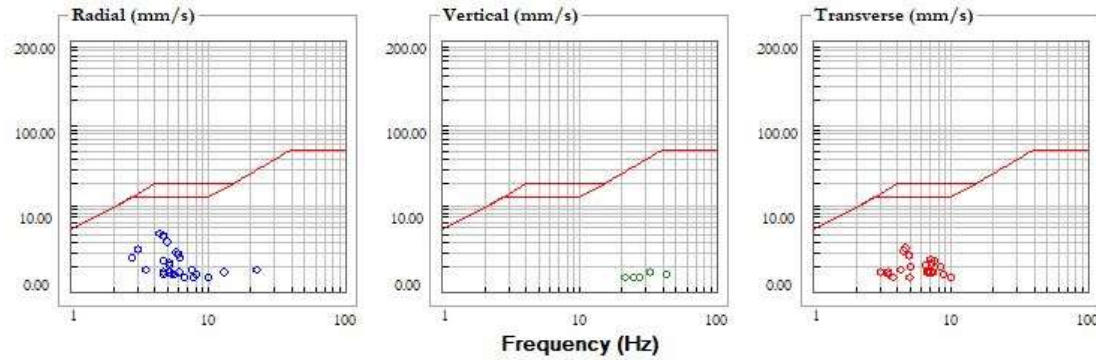


Figure 4.35 Frequency vs amplitude graph plotted at 550m distance.

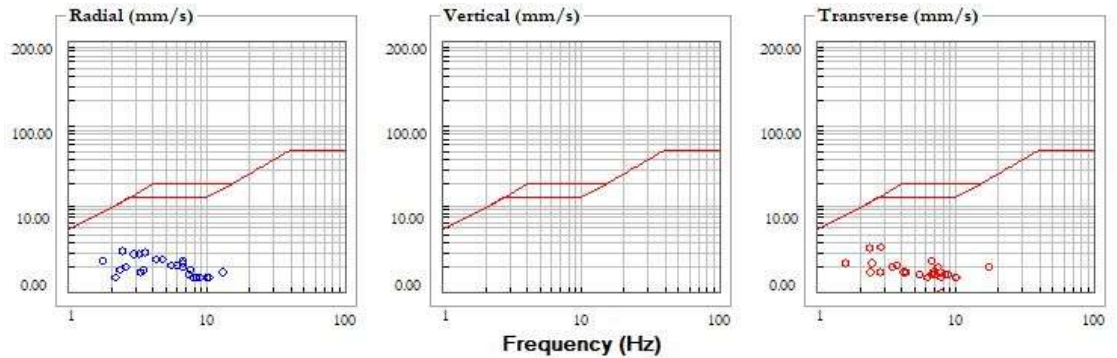


Figure 4.36 Frequency vs amplitude graph plotted at 600m distance.

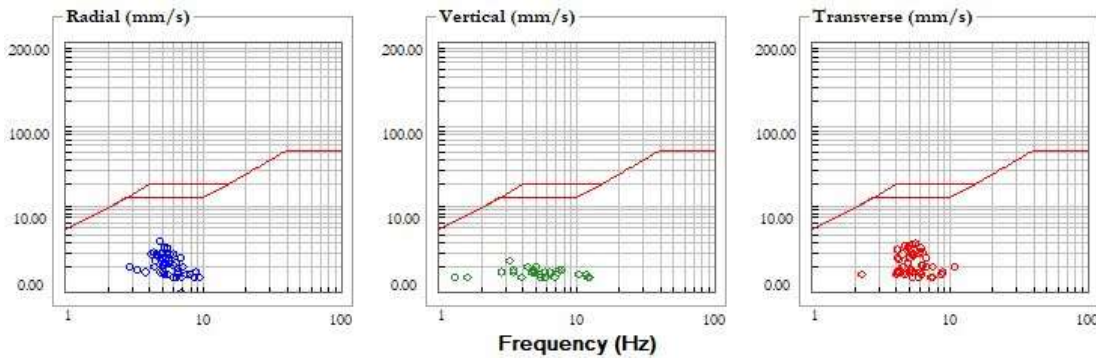


Figure 4.37 Frequency vs amplitude graph plotted at 650m distance.

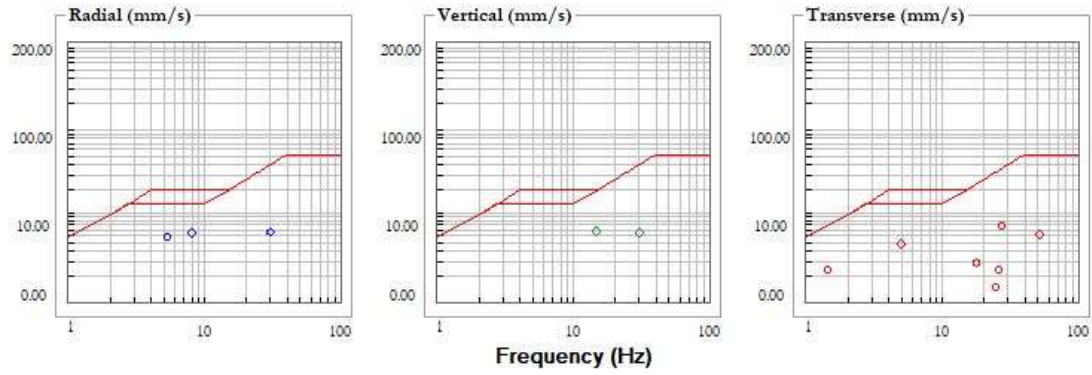


Figure 4.38 Frequency vs amplitude graph plotted at 700m distance.

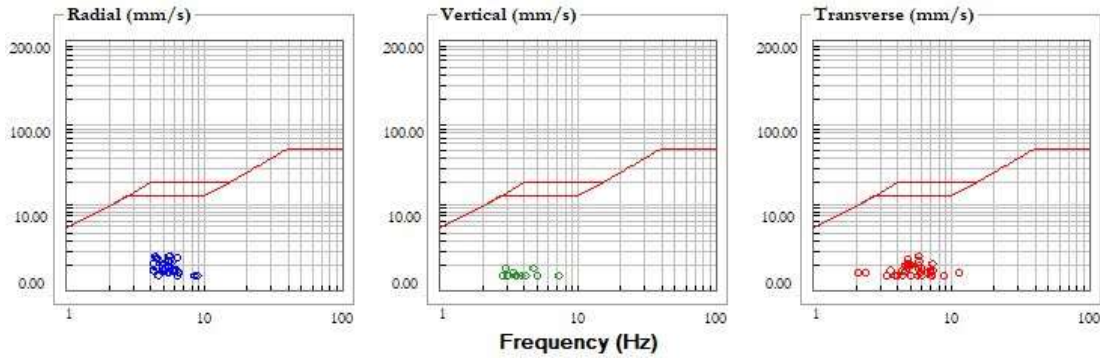


Figure 4.39 Frequency vs amplitude graph plotted at 750m distance.

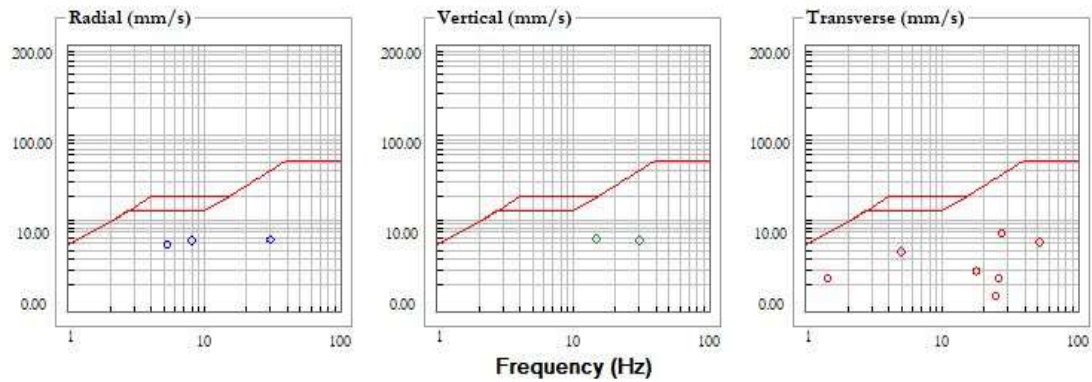


Figure 4.40 Frequency vs amplitude graph plotted at 800m distance.

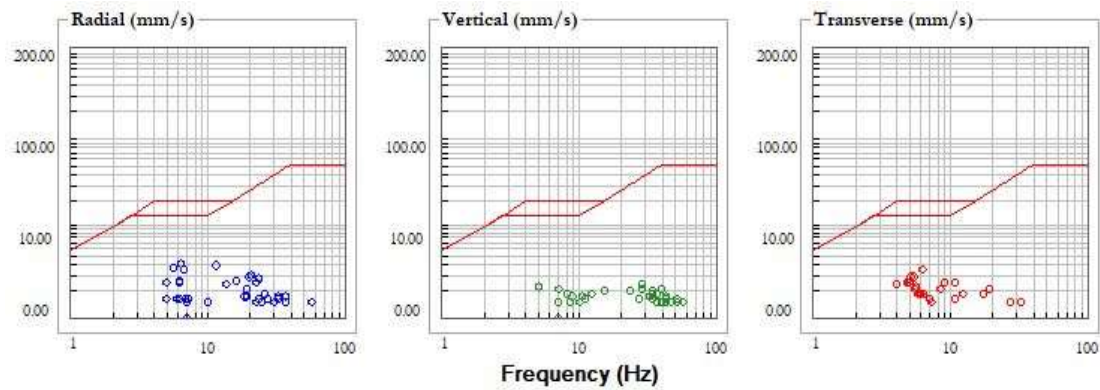


Figure 4.41 Frequency vs amplitude graph plotted at 850m distance.

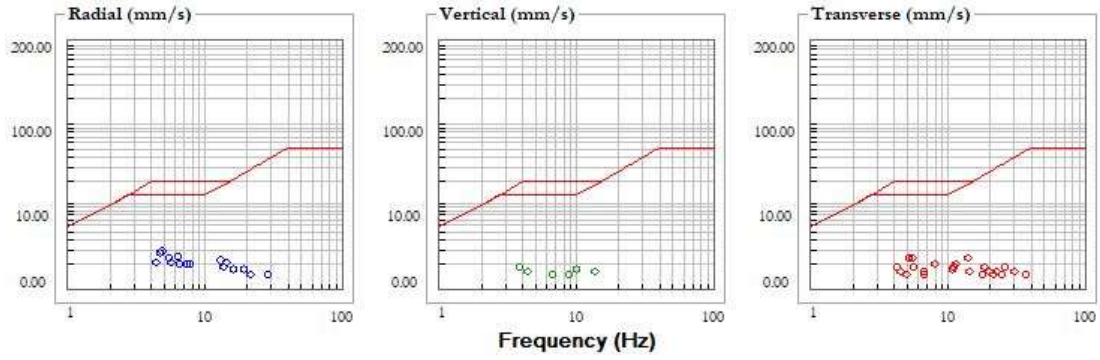


Figure 4.42 Frequency vs amplitude graph plotted at 900m distance.

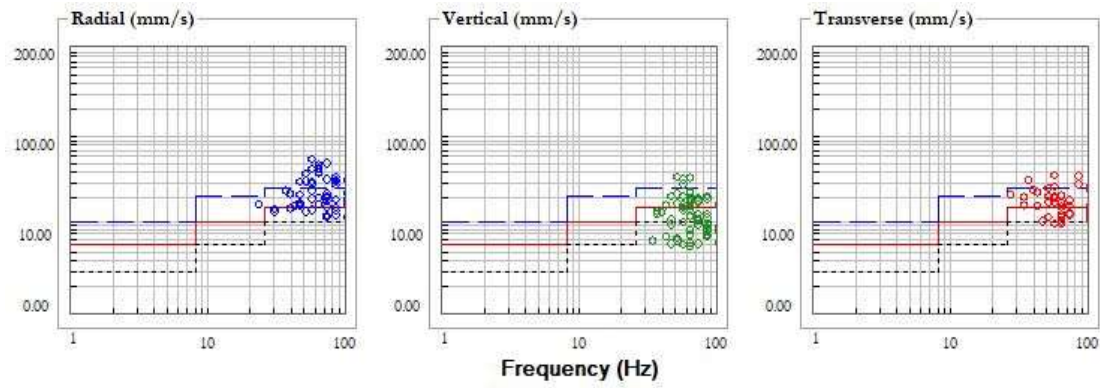


Figure 4.44 Frequency vs amplitude graph plotted at 100m distance.

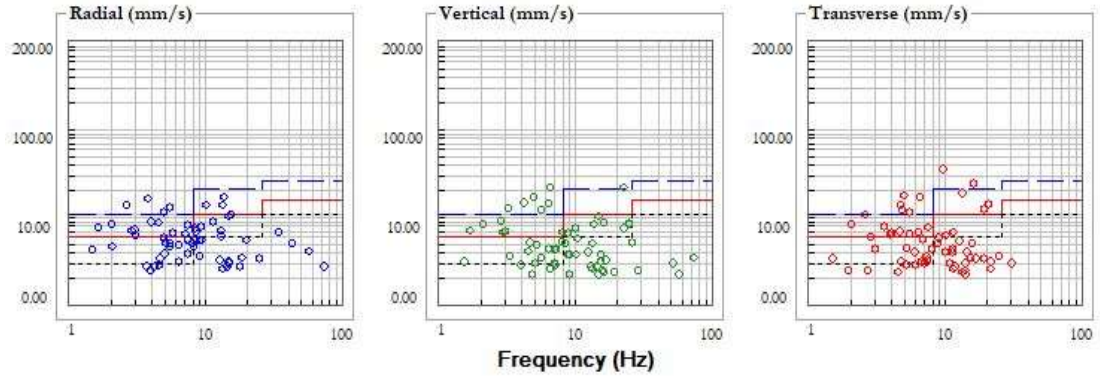


Figure 4.45 Frequency vs amplitude graph plotted at 150m distance.

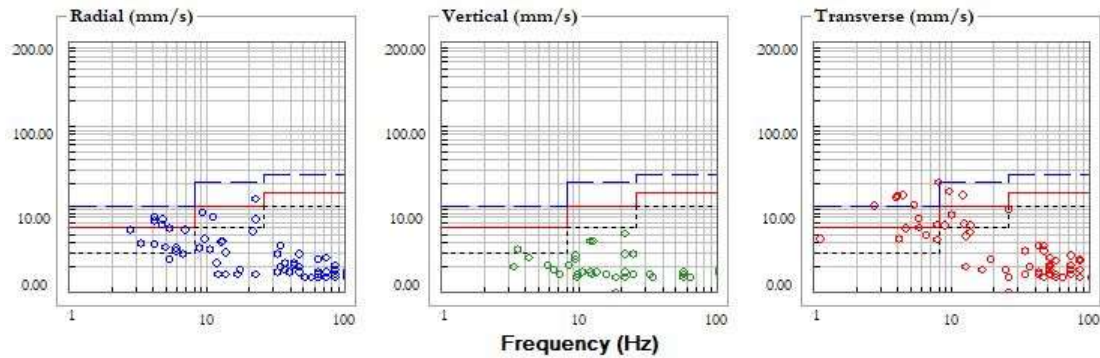


Figure 4.46 Frequency vs amplitude graph plotted at 200m distance.

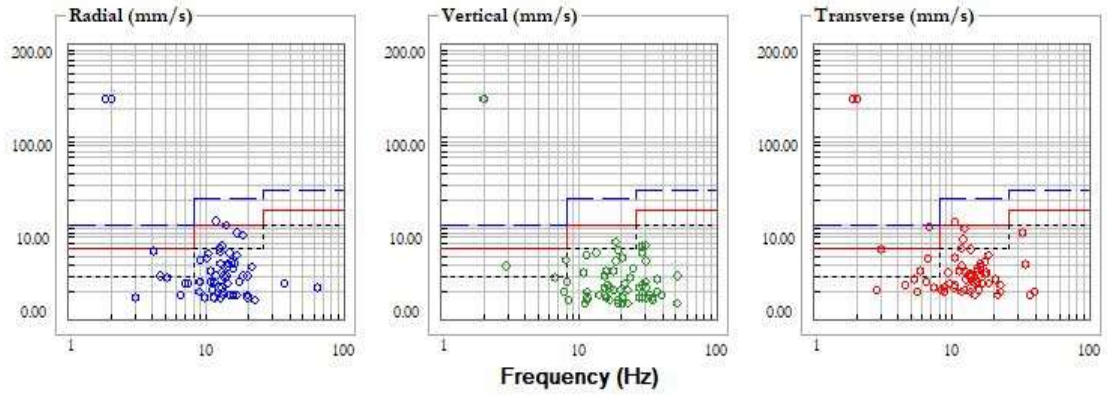


Figure 4.47 Frequency vs amplitude graph plotted at 250m distance.

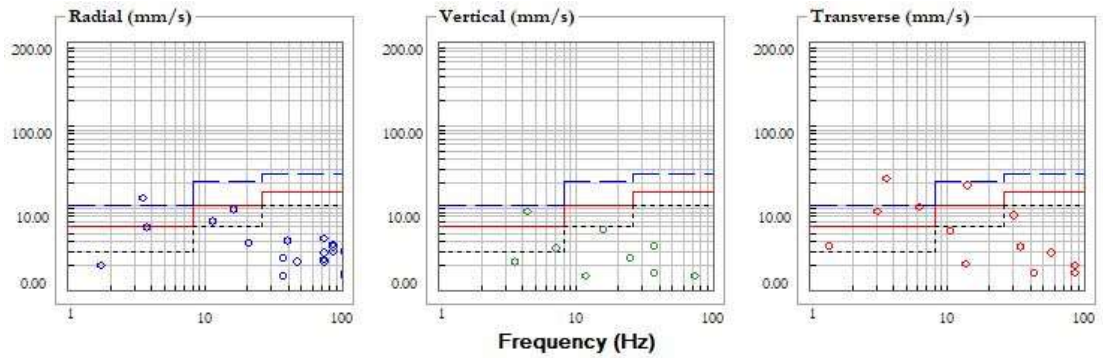


Figure 4.48 Frequency vs amplitude graph plotted at 300m distance.

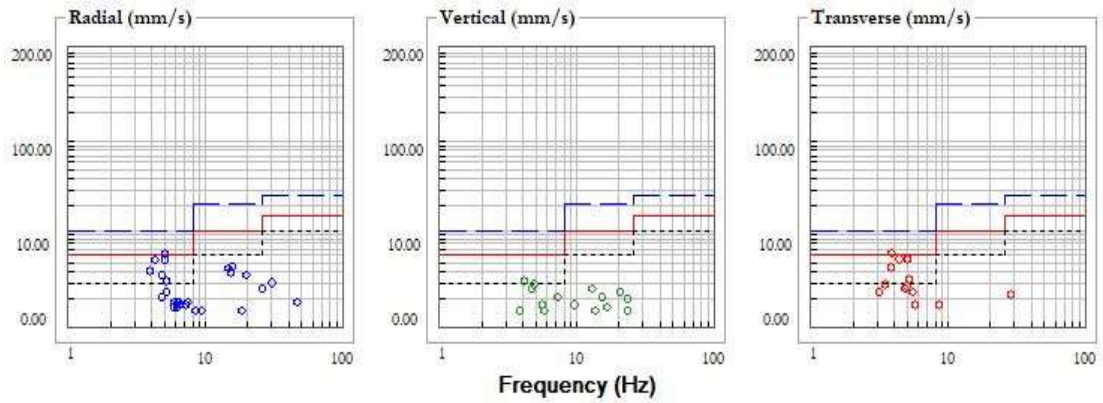


Figure 4.49 Frequency vs amplitude graph plotted at 350m distance.

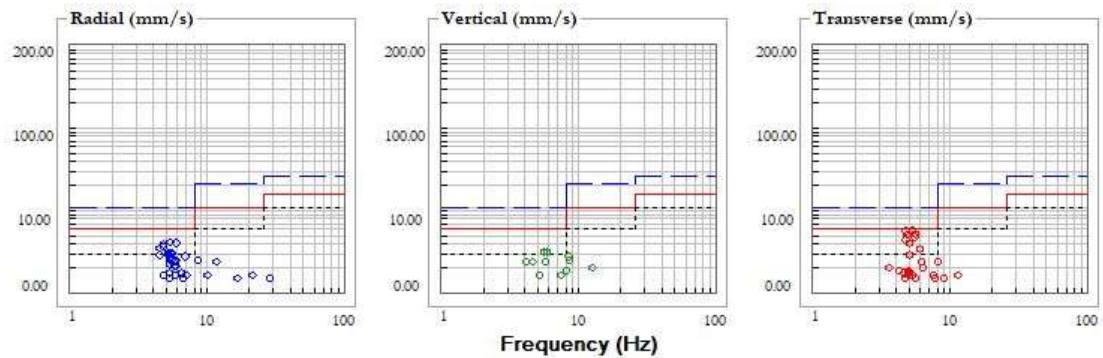


Figure 4.50 Frequency vs amplitude graph plotted at 400m distance.

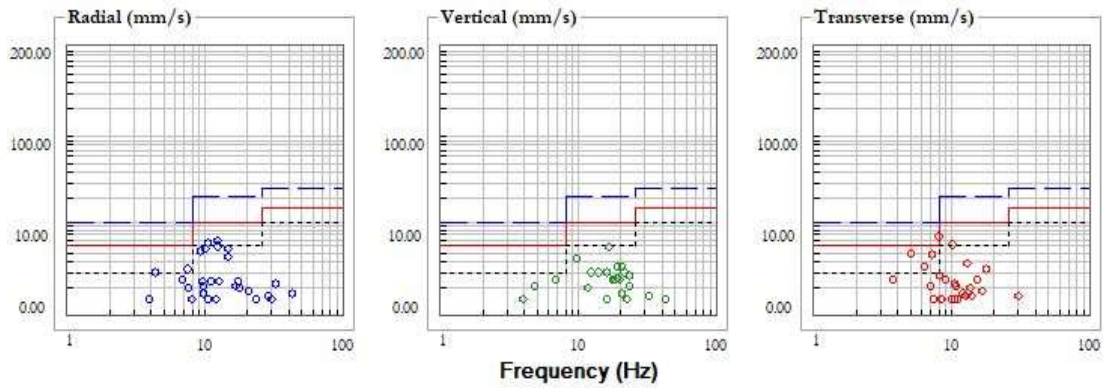


Figure 4.51 Frequency vs amplitude graph plotted at 450m distance.

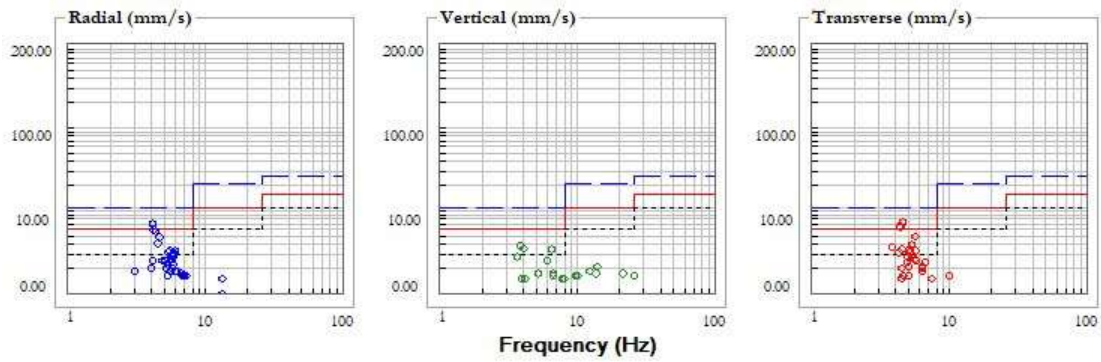


Figure 4.52 Frequency vs amplitude graph plotted at 500m distance.

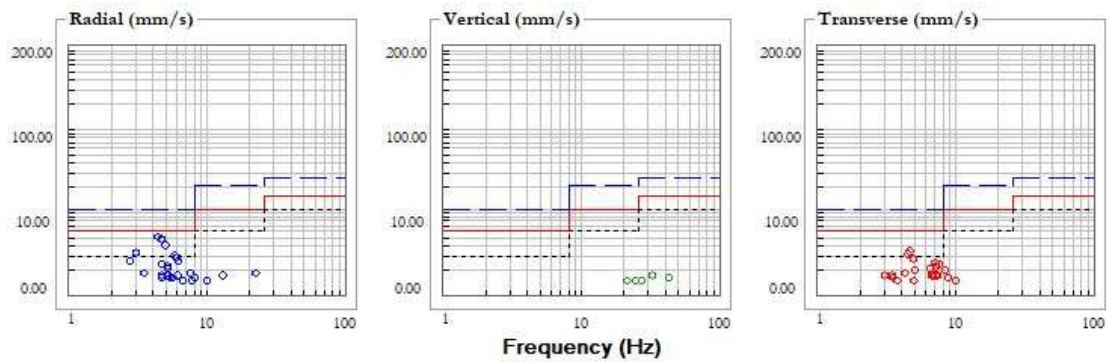


Figure 4.53 Frequency vs amplitude graph plotted at 550m distance.

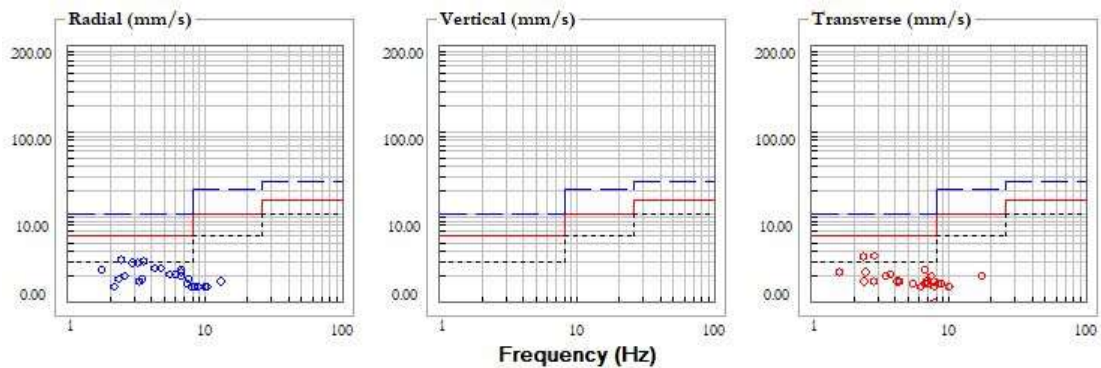
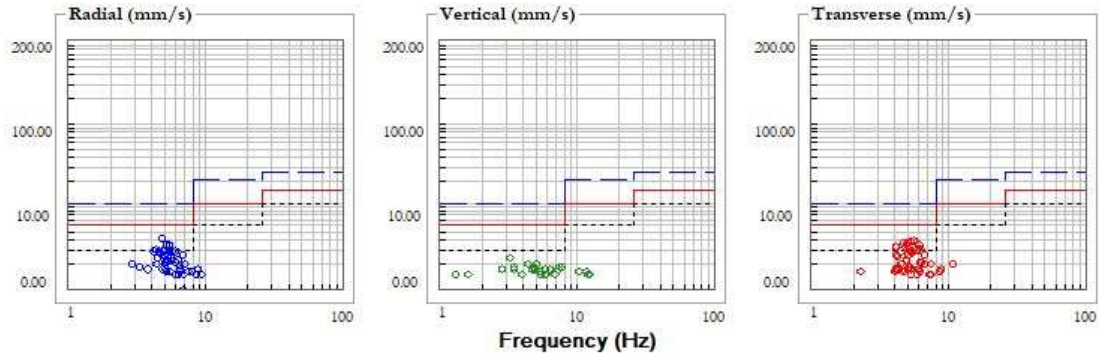


Figure 4.54 Frequency vs amplitude graph plotted at 600m distance.



4.55 Frequency vs amplitude graph plotted at 650m distance.

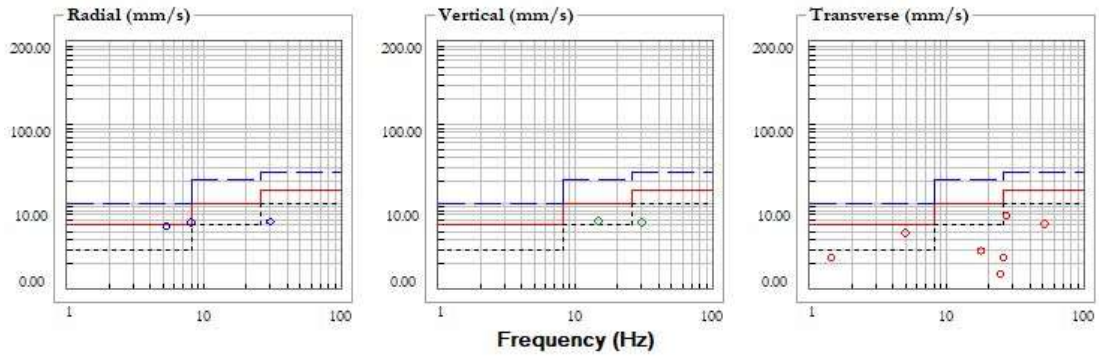


Figure 4.56 Frequency vs amplitude graph plotted at 700m distance.

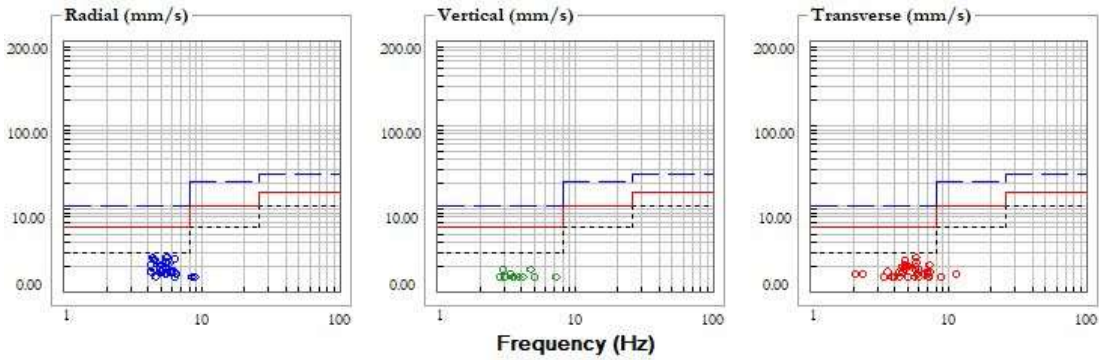


Figure 4.57 Frequency vs amplitude graph plotted at 750m distance.

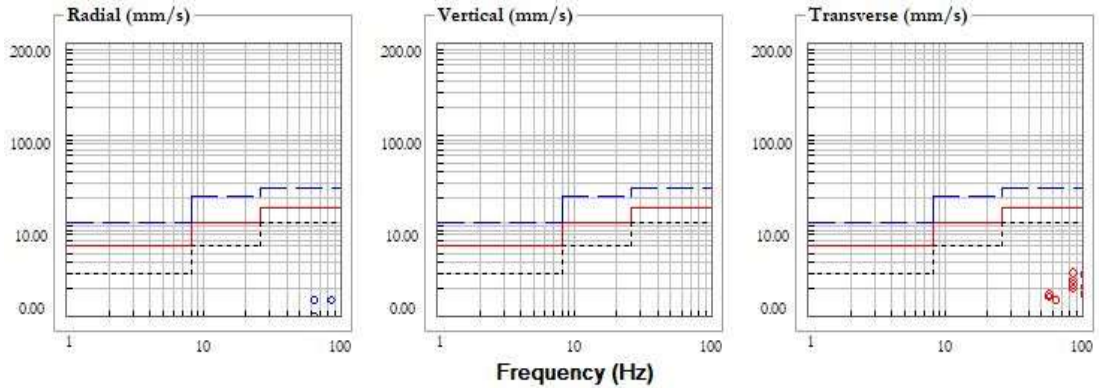


Figure 4.58 Frequency vs amplitude graph plotted at 800m distance.

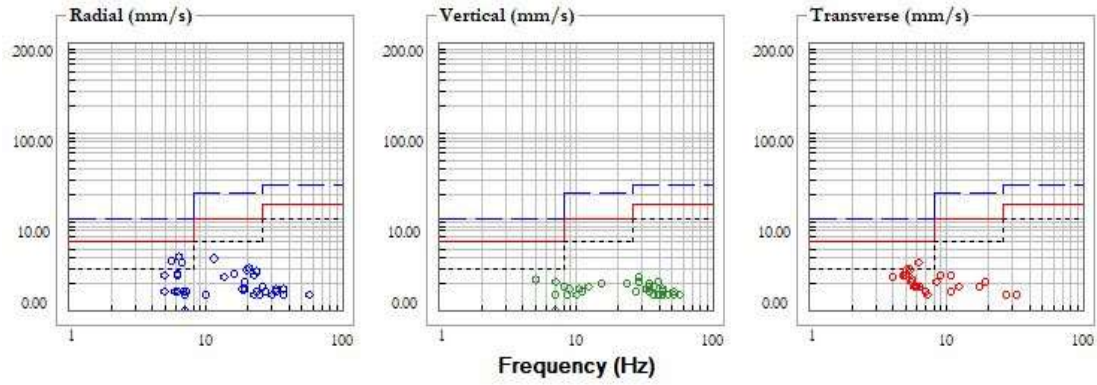


Figure 4.59 Frequency vs amplitude graph plotted at 850m distance.

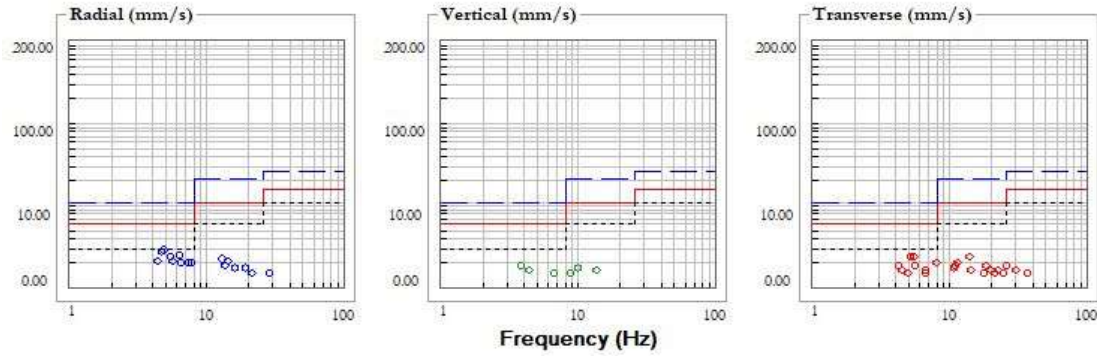


Figure 4.60 Frequency vs amplitude graph plotted at 900m distance.

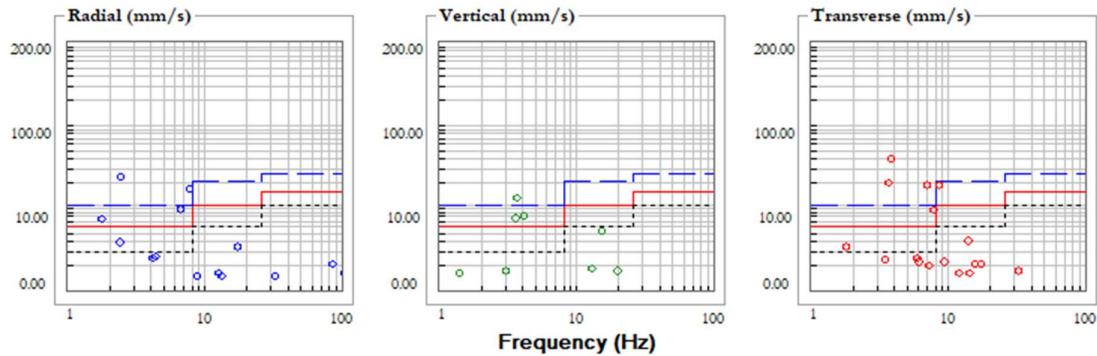


Figure 4.63 Frequency vs amplitude graph plotted at 100m distance.

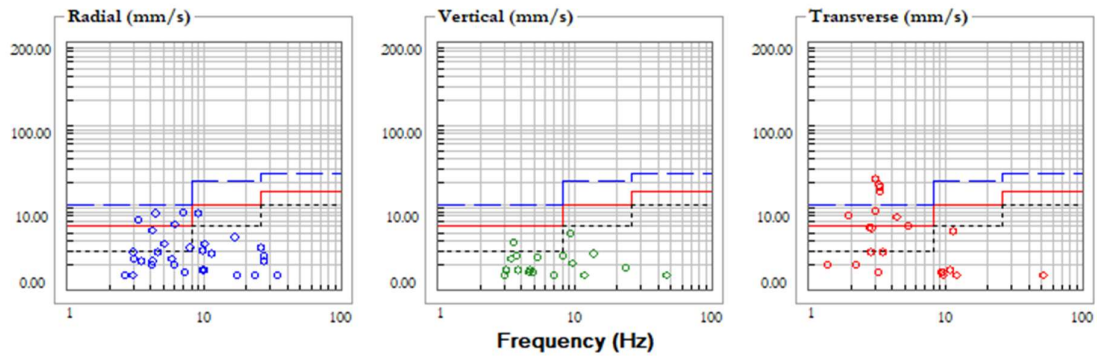


Figure 4.64 Frequency vs amplitude graph plotted at 150m distance.

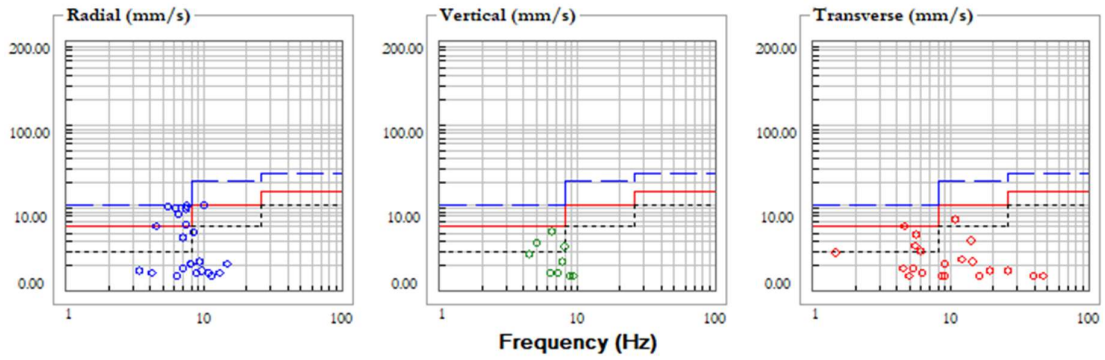


Figure 4.65 Frequency vs amplitude graph plotted at 200m distance.

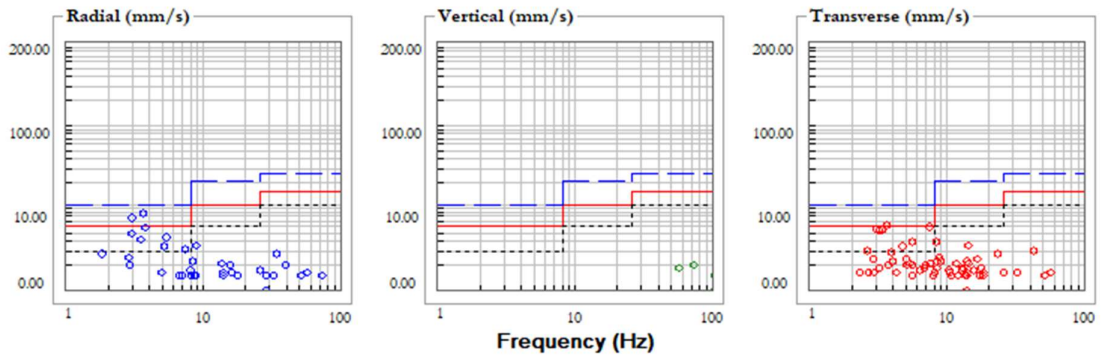


Figure 4.66 Frequency vs amplitude graph plotted at 250m distance.

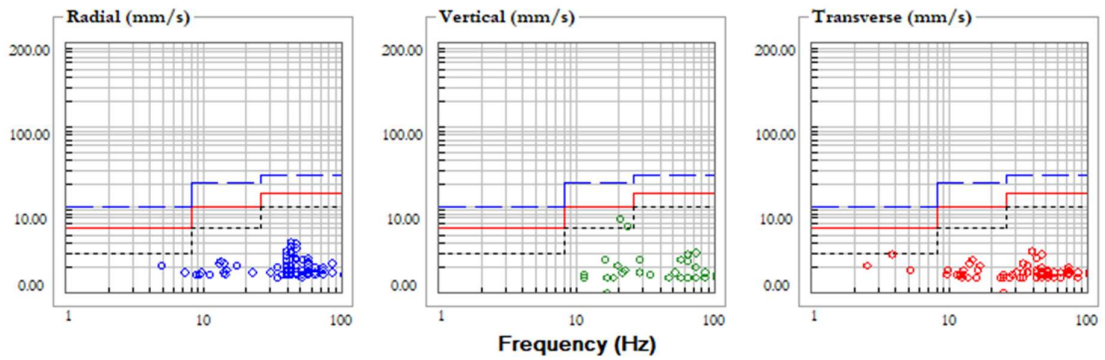


Figure 4.67 Frequency vs amplitude graph plotted at 300m distance.

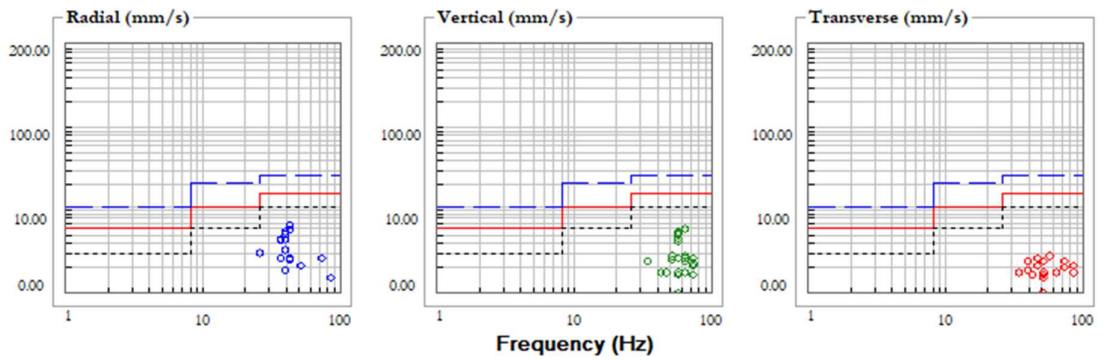


Figure 4.68 Frequency vs amplitude graph plotted at 350m distance.

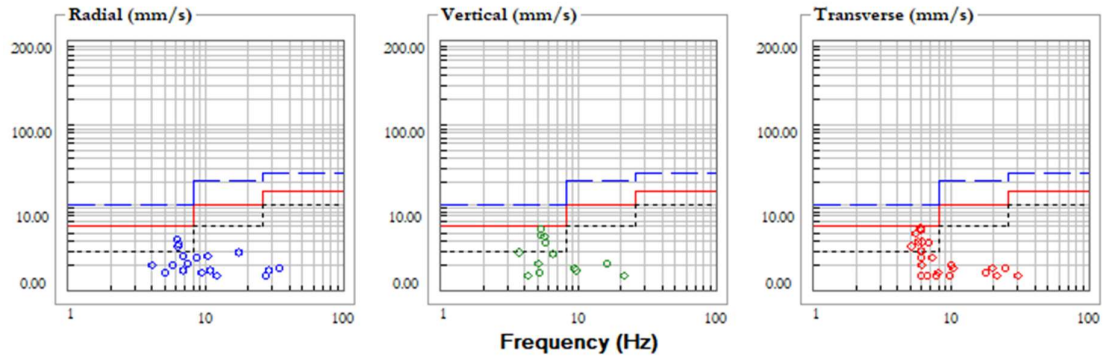


Figure 4.69 Frequency vs amplitude graph plotted at 400m distance.

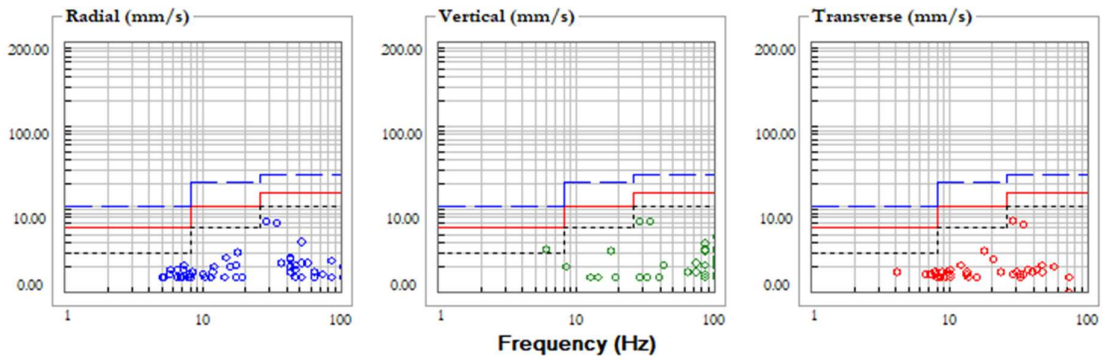


Figure 4.70 Frequency vs amplitude graph plotted at 450m distance.

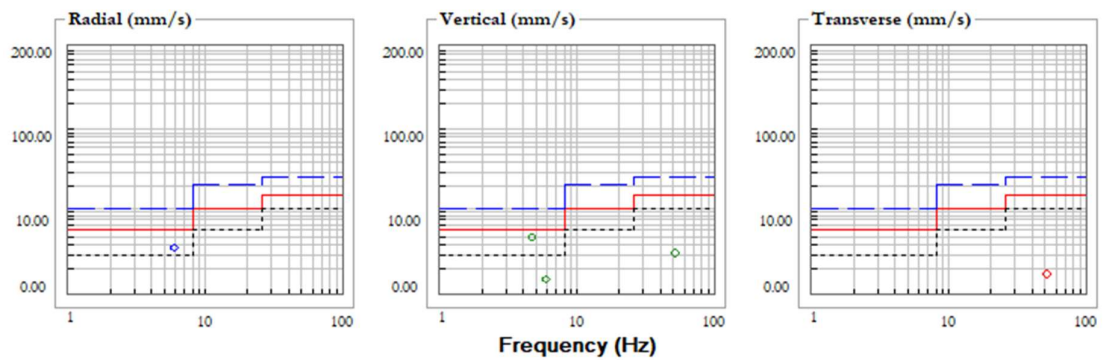


Figure 4.71 Frequency vs amplitude graph plotted at 500m distance.

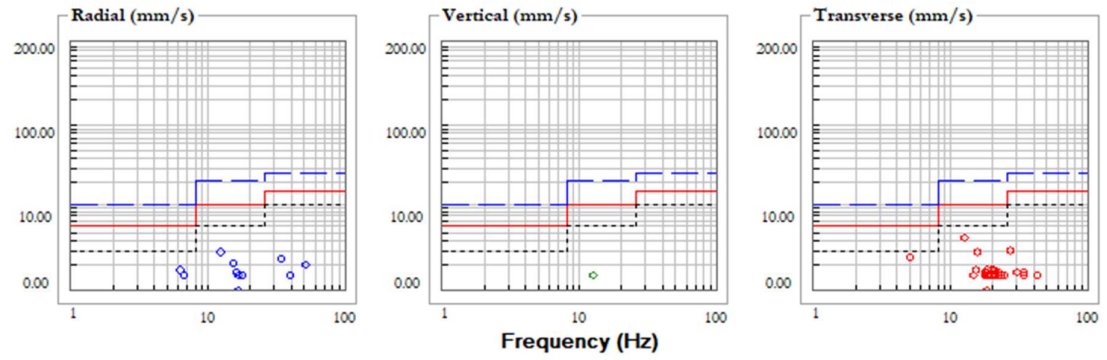


Figure 4.72 Frequency vs amplitude graph plotted at 550m distance.

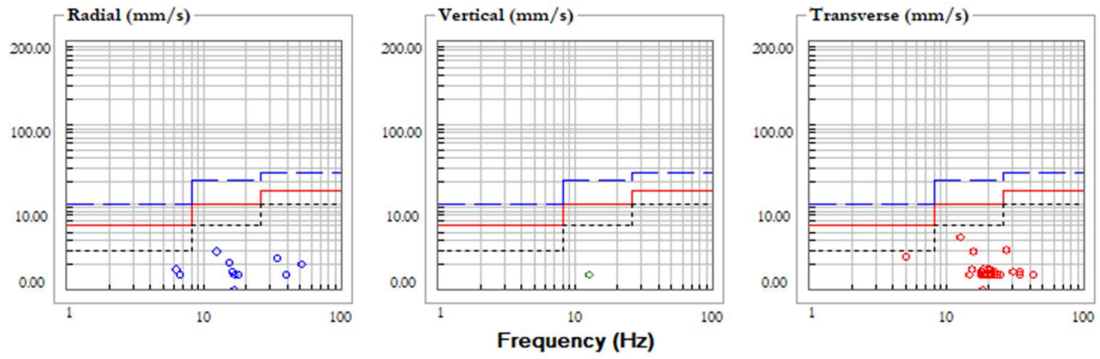


Figure 4.73 Frequency vs amplitude graph plotted at 600m distance.

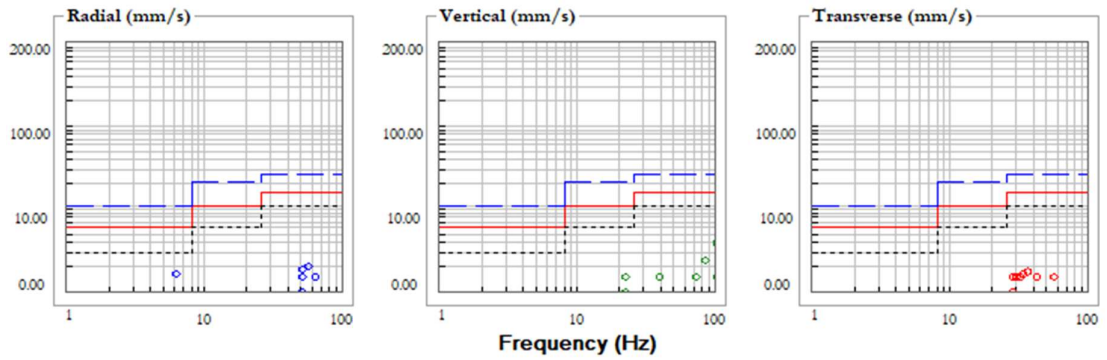


Figure 4.74 Frequency vs amplitude graph plotted at 650m distance.

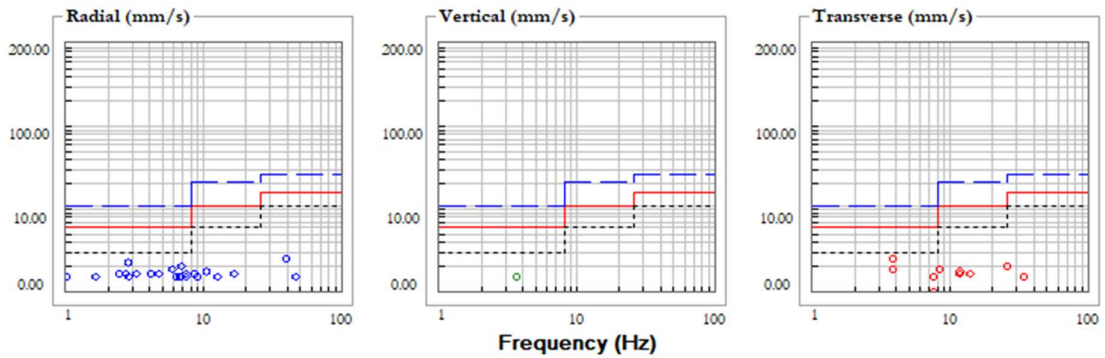


Figure 4.75 Frequency vs amplitude graph plotted at 700m distance.

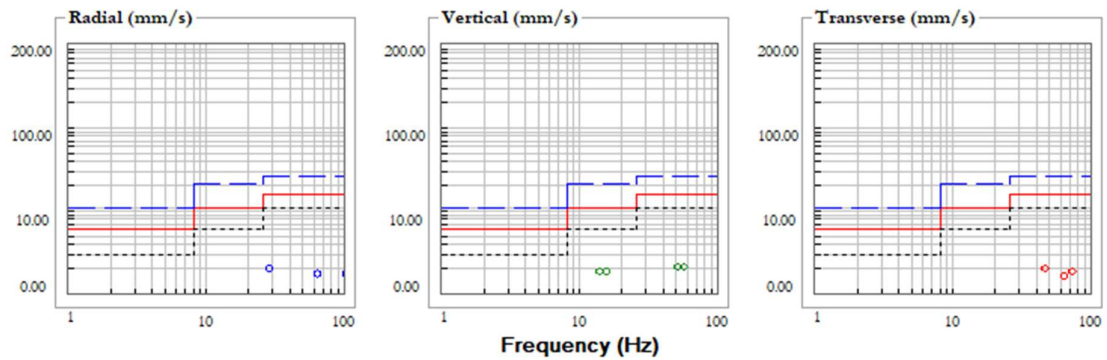


Figure 4.76 Frequency vs amplitude graph plotted at 750m distance.

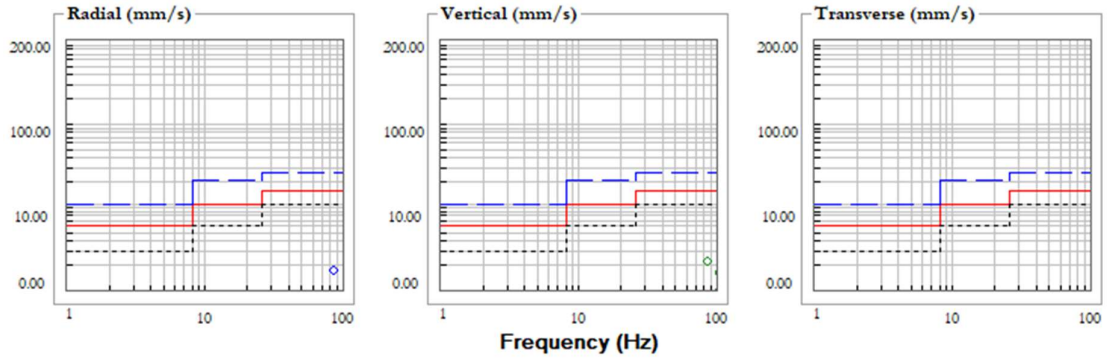


Figure 4.77 Frequency vs amplitude graph plotted at 800m distance.

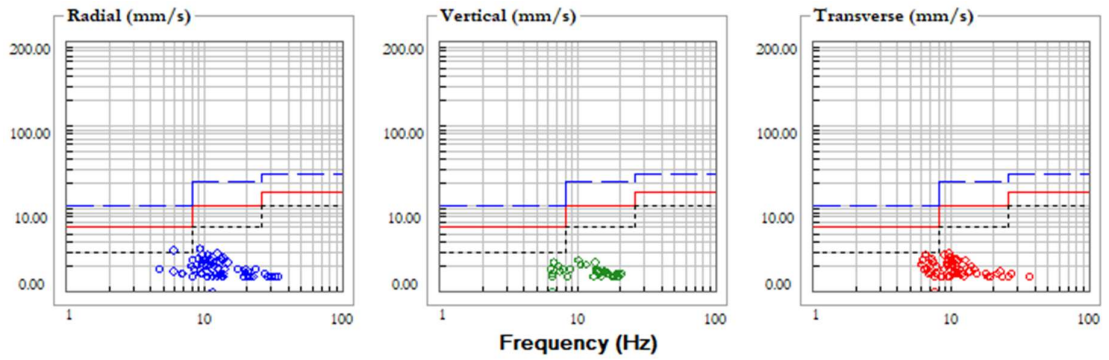


Figure 4.78 Frequency vs amplitude graph plotted at 850m distance.

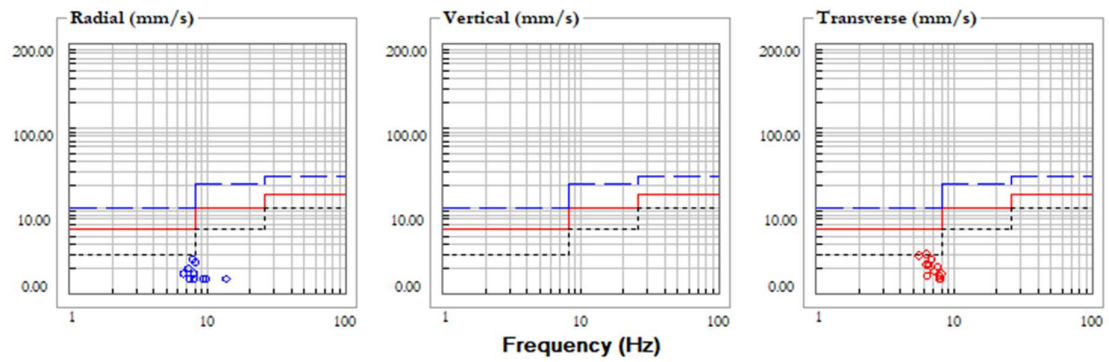


Figure 4.79 Frequency vs amplitude graph plotted at 900m distance.

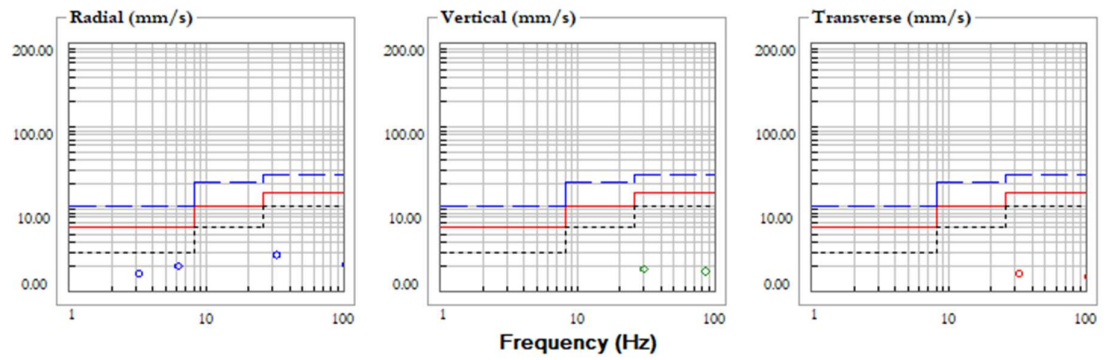


Figure 4.80 Frequency vs amplitude graph plotted at 950m distance.

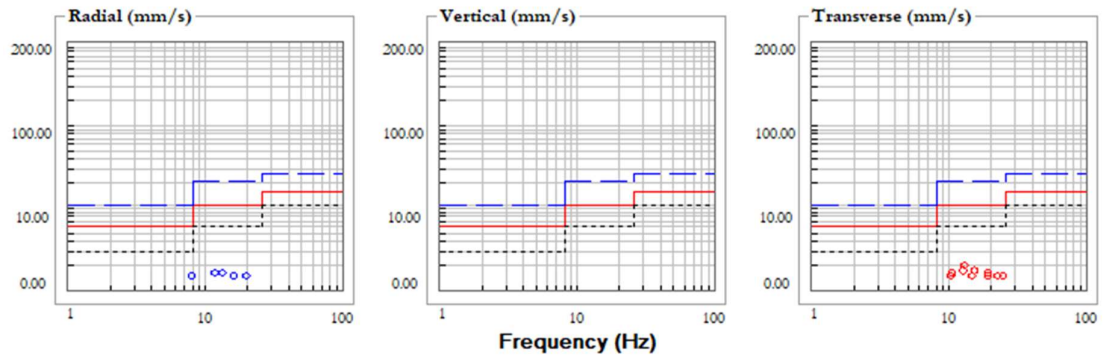


Figure 4.81 Frequency vs amplitude graph plotted at 1000m distance.

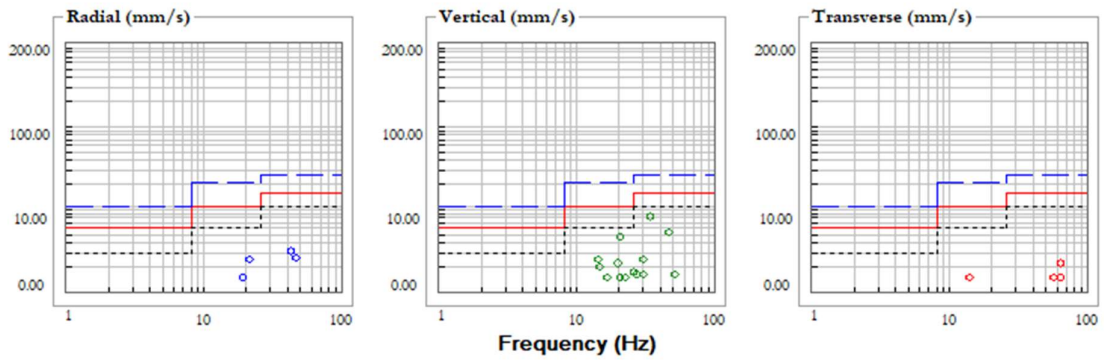


Figure 4.83 Frequency vs amplitude graph plotted at 100m distance.

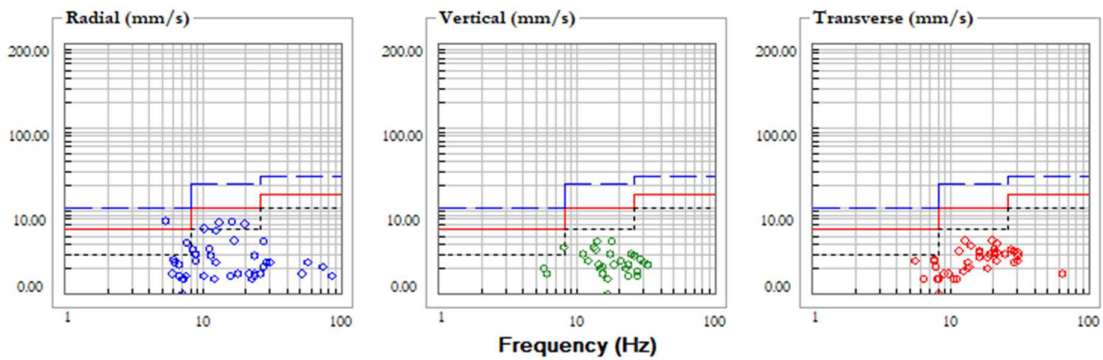


Figure 4.84 Frequency vs amplitude graph plotted at 150m distance.

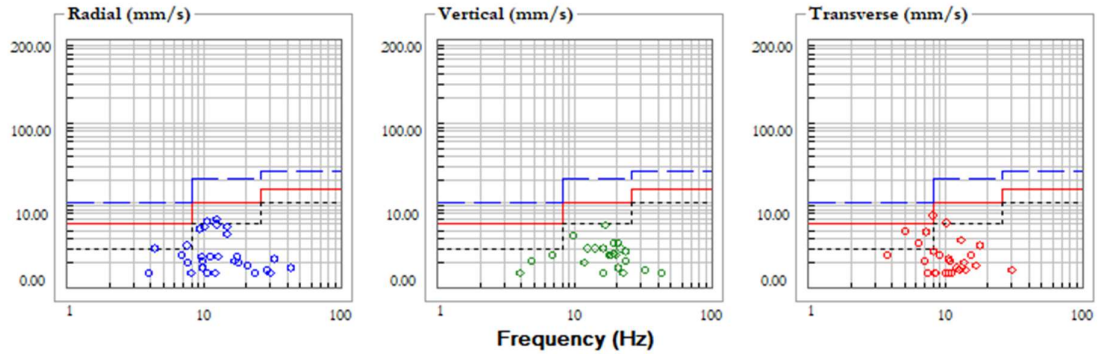


Figure 4.85 Frequency vs amplitude graph plotted at 200m distance.

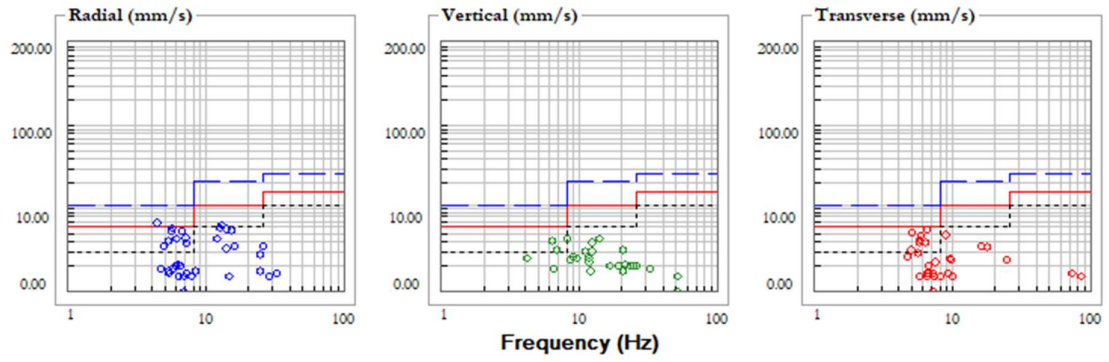


Figure 4.86 Frequency vs amplitude graph plotted at 250m distance.

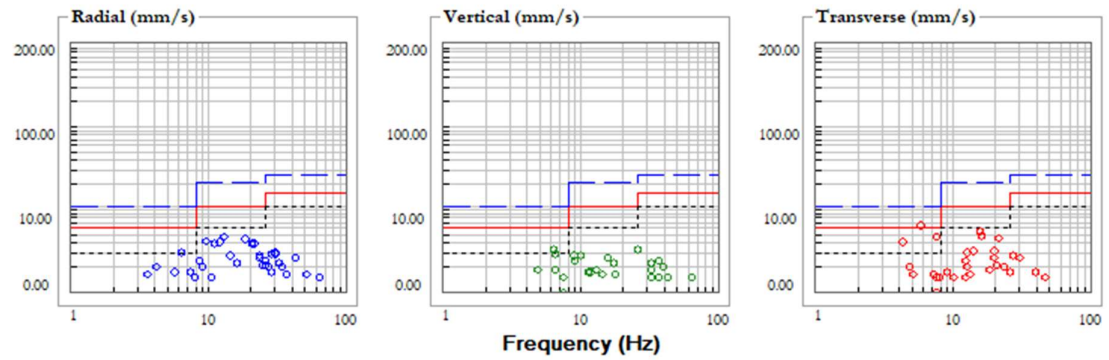


Figure 4.87 Frequency vs amplitude graph plotted at 300m distance.

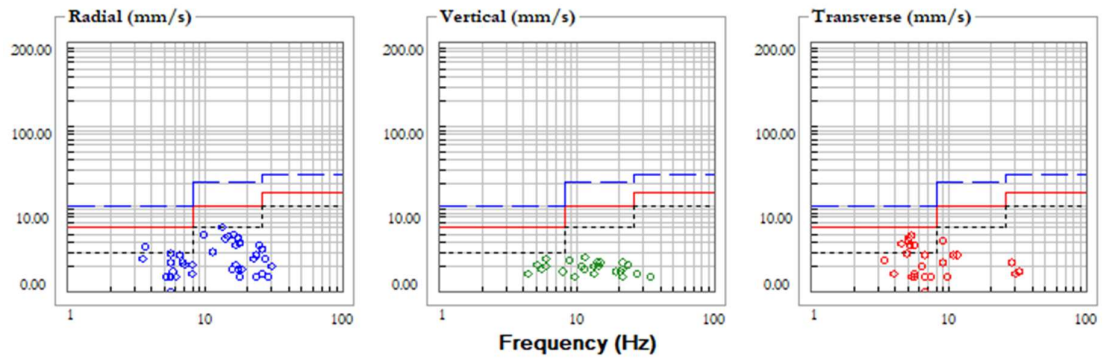


Figure 4.88 Frequency vs amplitude graph plotted at 350m distance.

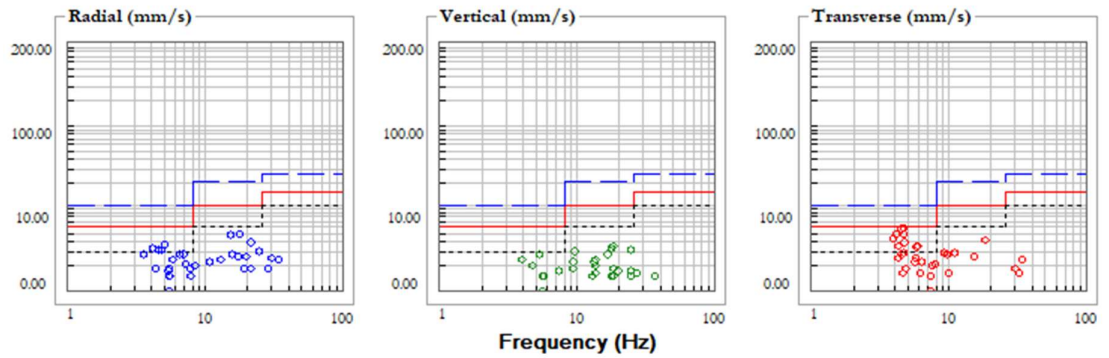


Figure 4.89 Frequency vs amplitude graph plotted at 400m distance.

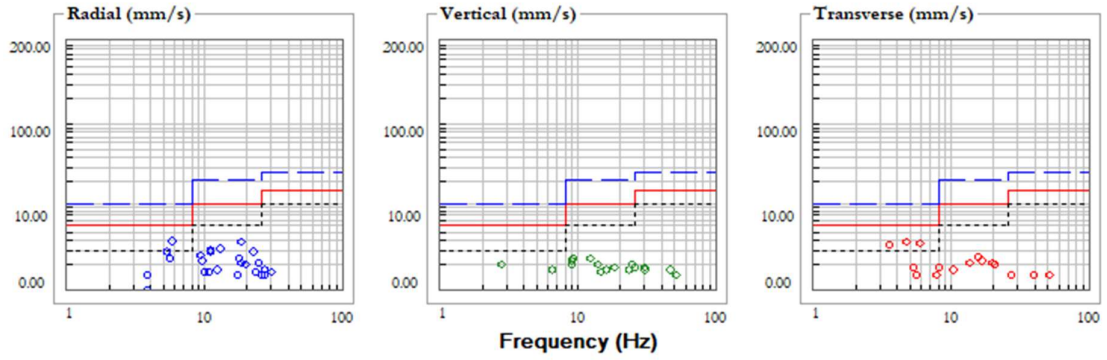


Figure 4.90 Frequency vs amplitude graph plotted at 450m distance.

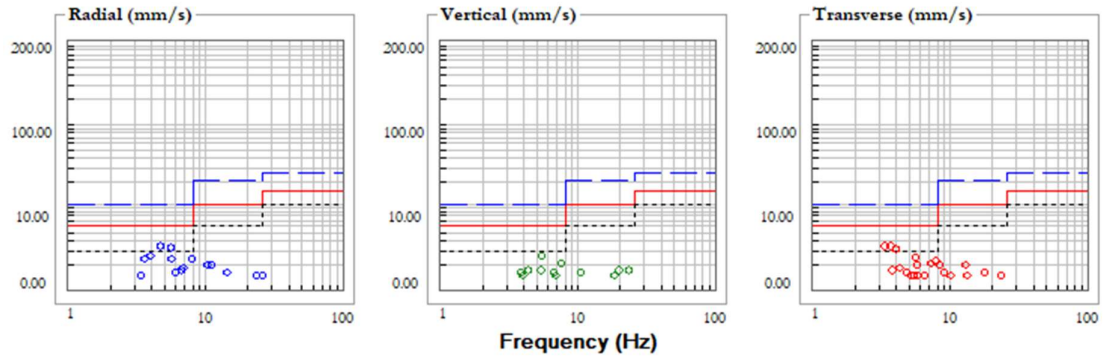


Figure 4.91 Frequency vs amplitude graph plotted at 500m distance.

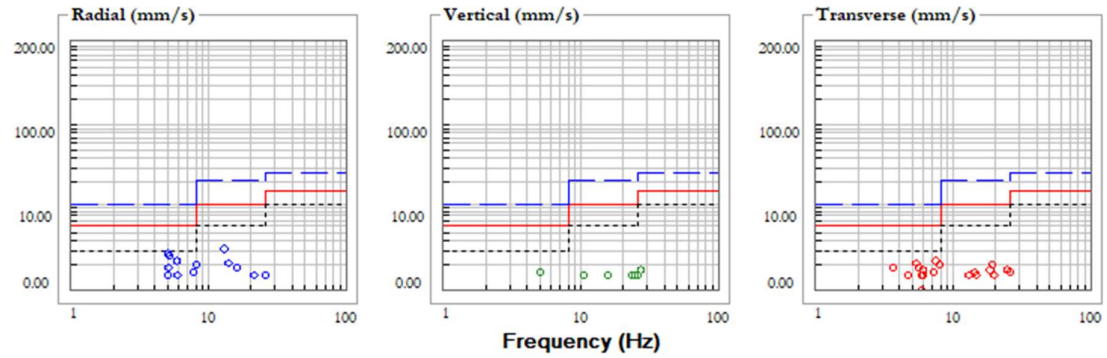


Figure 4.92 Frequency vs amplitude graph plotted at 550m distance.

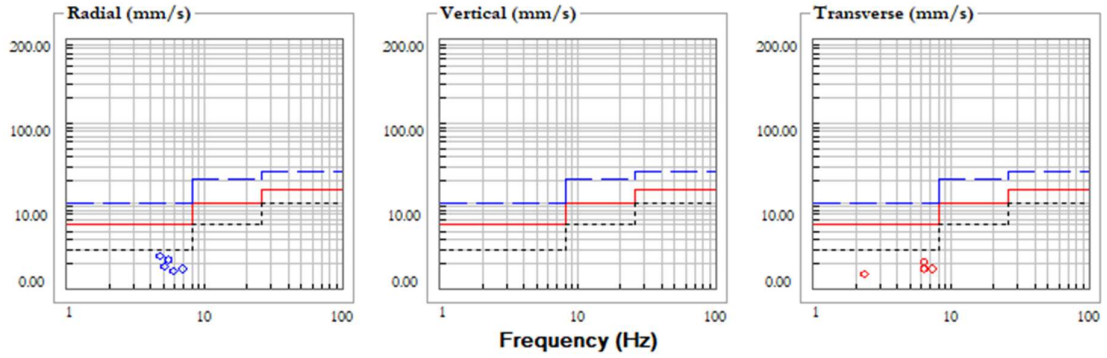


Figure 4.93 Frequency vs amplitude graph plotted at 600m distance.

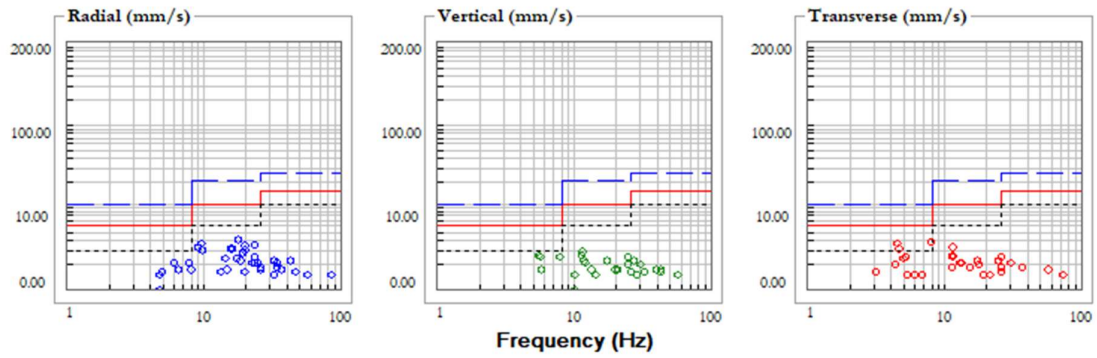


Figure 4.94 Frequency vs amplitude graph plotted at 650m distance.

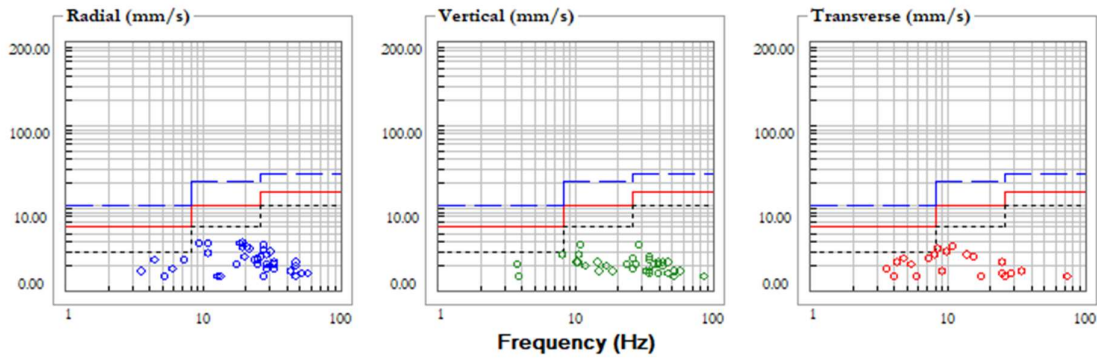


Figure 4.95 Frequency vs amplitude graph plotted at 700m distance.

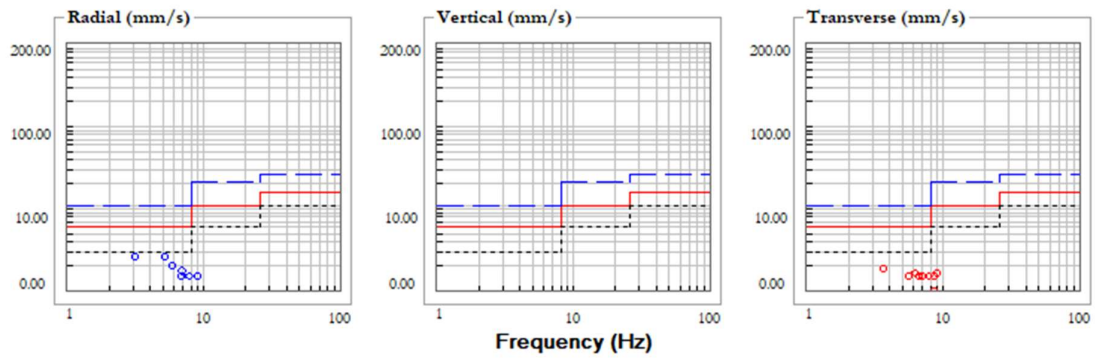


Figure 4.96 Frequency vs amplitude graph plotted at 750m distance.

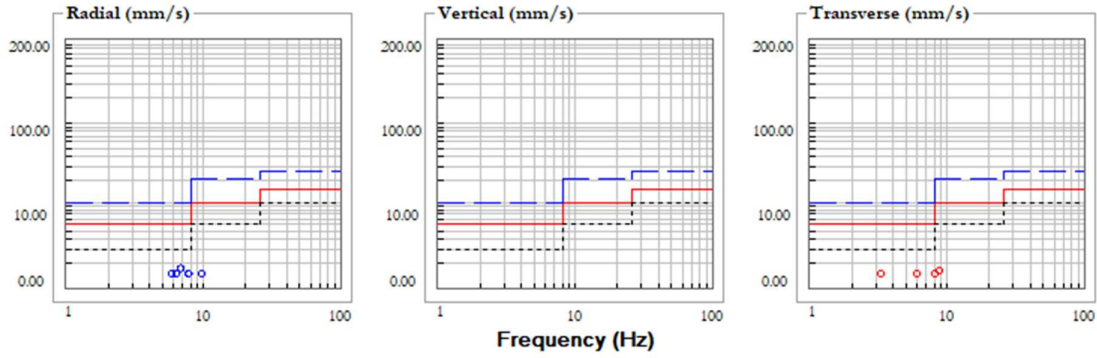


Figure 4.97 Frequency vs amplitude graph plotted at 800m distance.

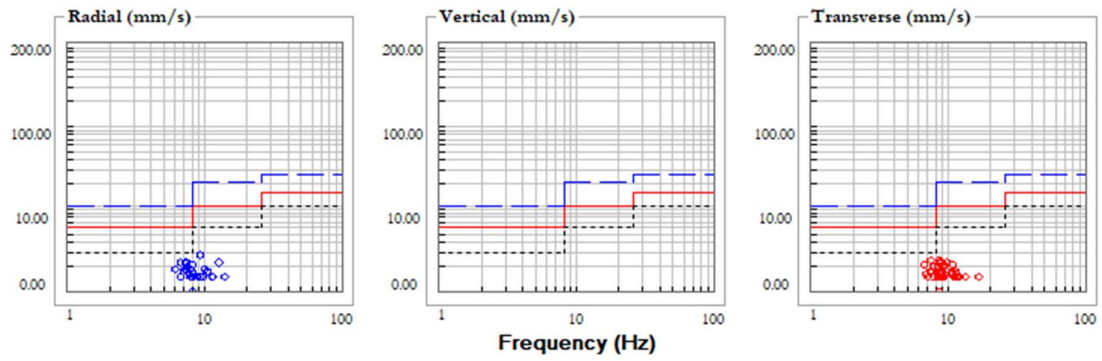


Figure 4.98 Frequency vs amplitude graph plotted at 850m distance.

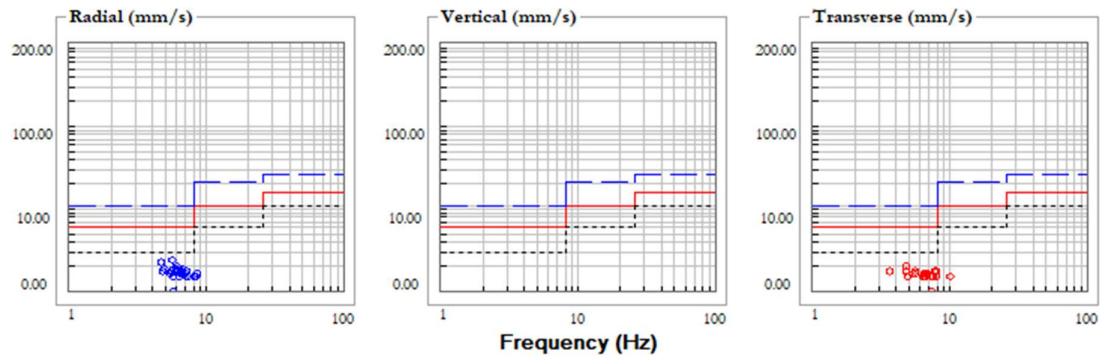


Figure 4.99 Frequency vs amplitude graph plotted at 900m distance.

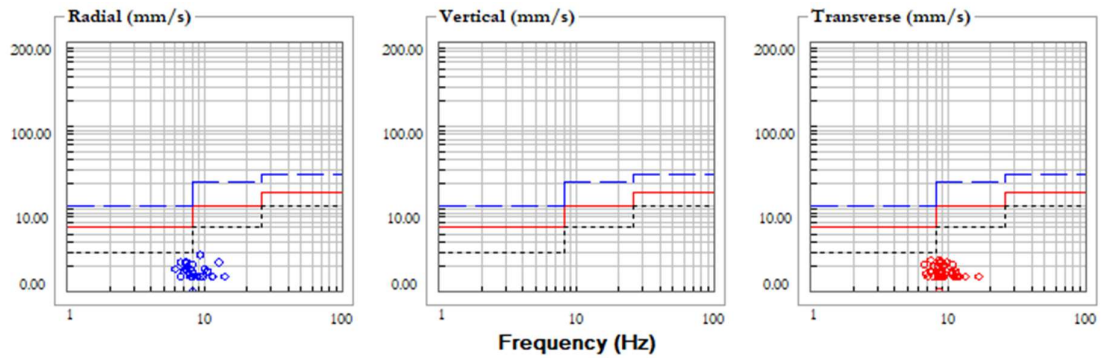


Figure 4.100 Frequency vs amplitude graph plotted at 950m distance.

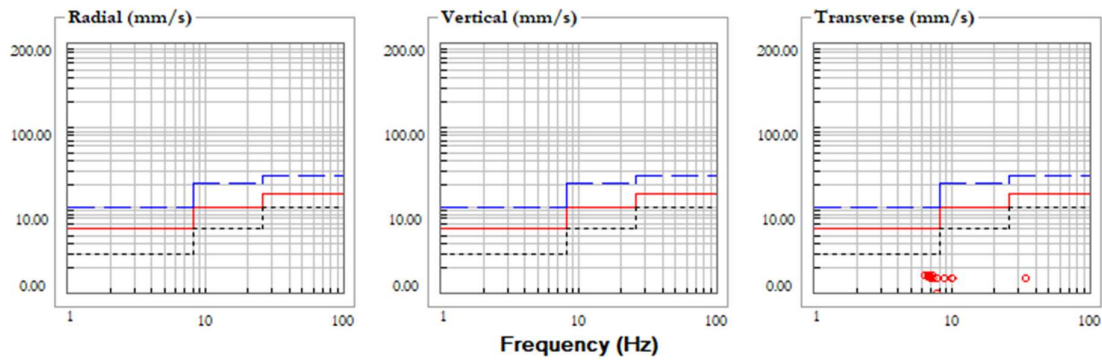


Figure 4.101 Frequency vs amplitude graph plotted at 1000m distance.

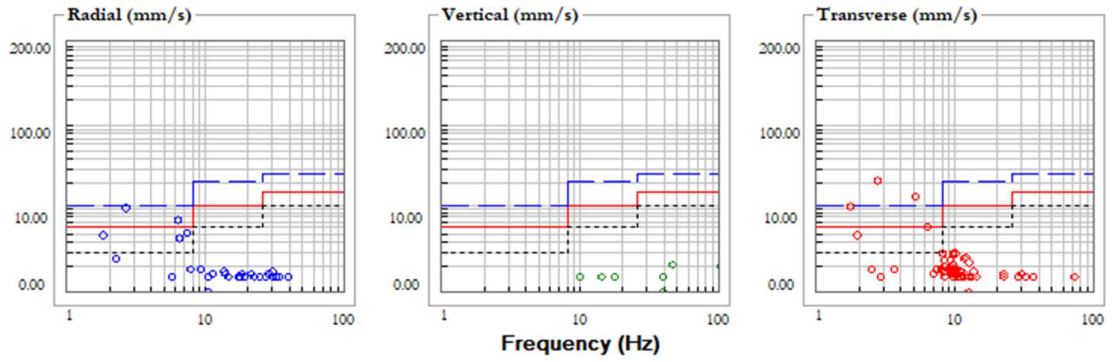


Figure 4.103 Frequency vs amplitude graph plotted at 100m distance.

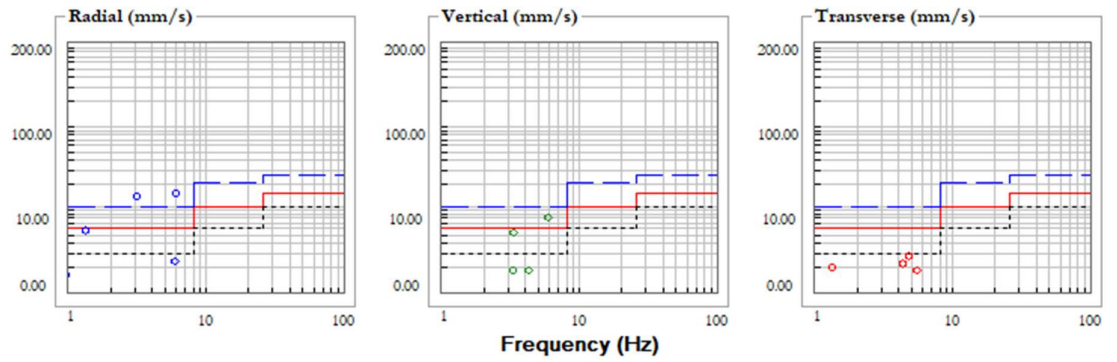


Figure 4.104 Frequency vs amplitude graph plotted at 150m distance.

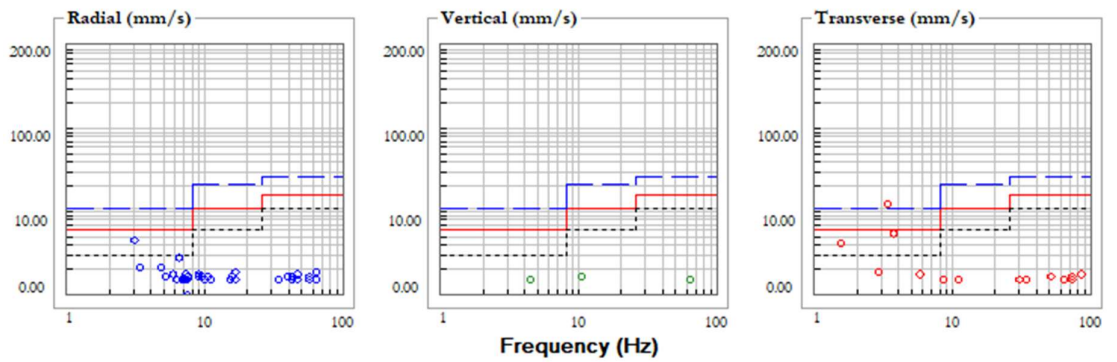


Figure 4.105 Frequency vs amplitude graph plotted at 200m distance.

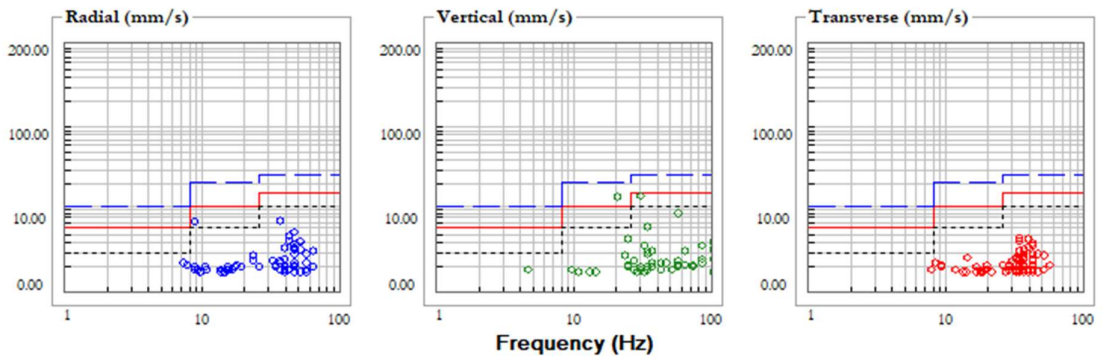


Figure 4.106 Frequency vs amplitude graph plotted at 250m distance.

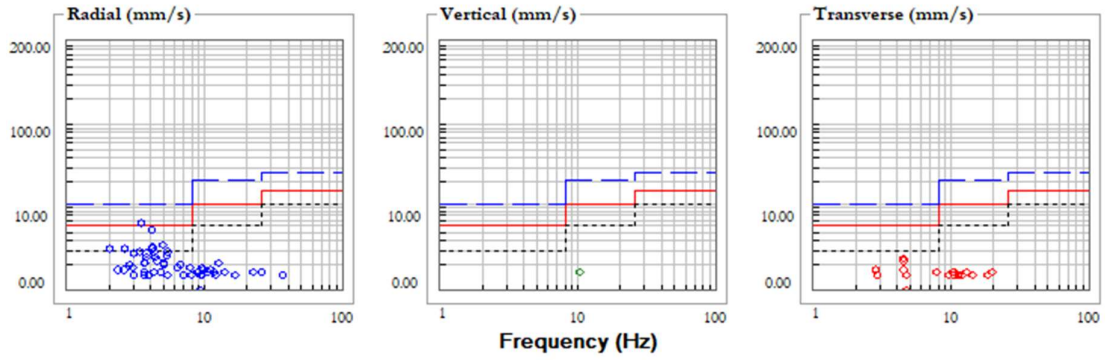


Figure 4.107 Frequency vs amplitude graph plotted at 300m distance.

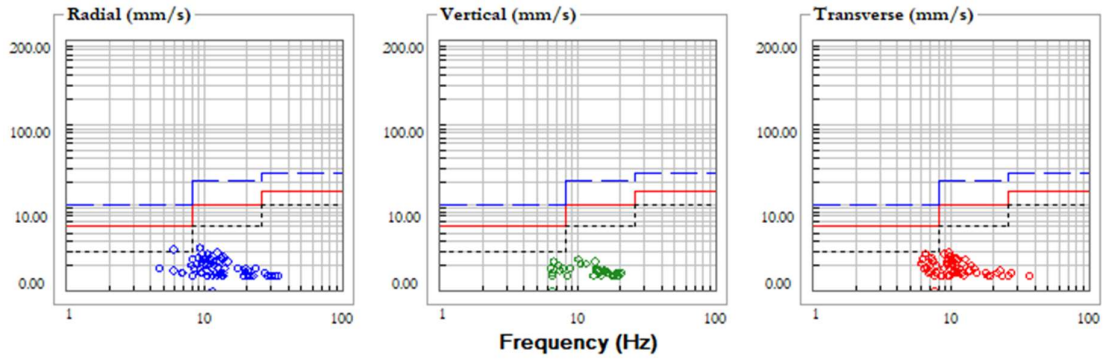


Figure 4.108 Frequency vs amplitude graph plotted at 350m distance.

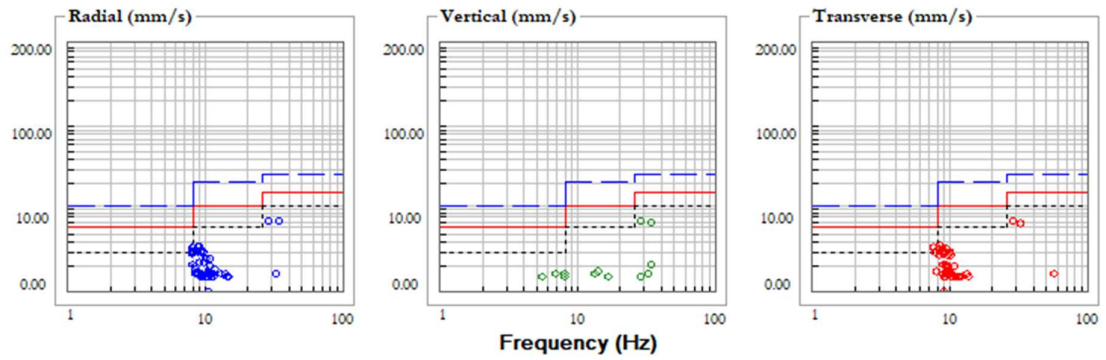


Figure 4.109 Frequency vs amplitude graph plotted at 400m distance.

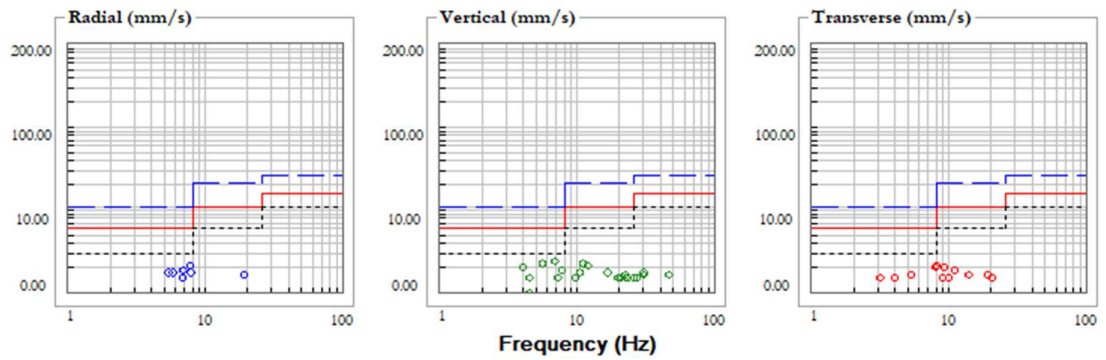


Figure 4.110 Frequency vs amplitude graph plotted at 450m distance.

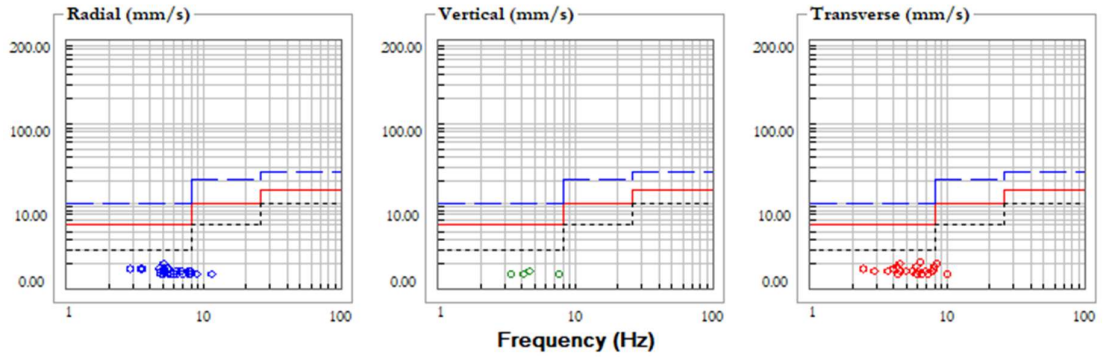


Figure 4.111 Frequency vs amplitude graph plotted at 500m distance.

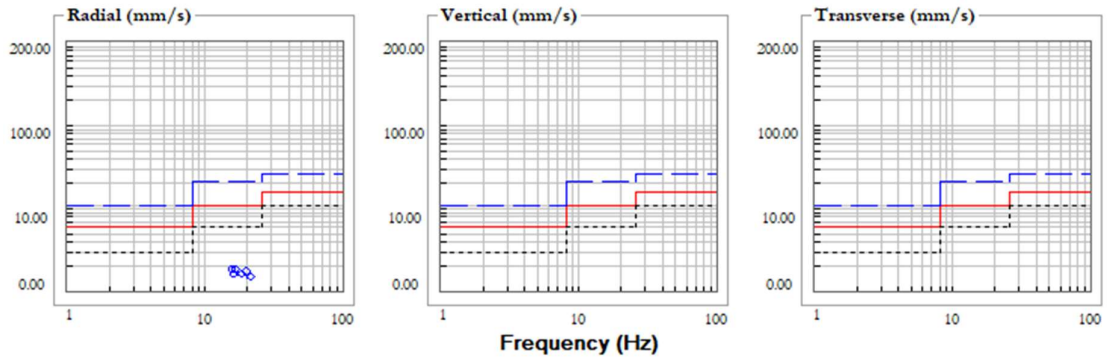


Figure 4.112 Frequency vs amplitude graph plotted at 550m distance.

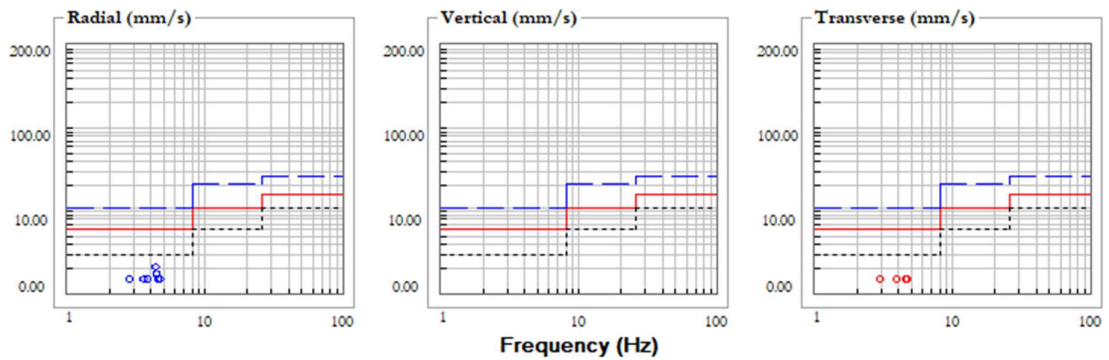


Figure 4.113 Frequency vs amplitude graph plotted at 600m distance.

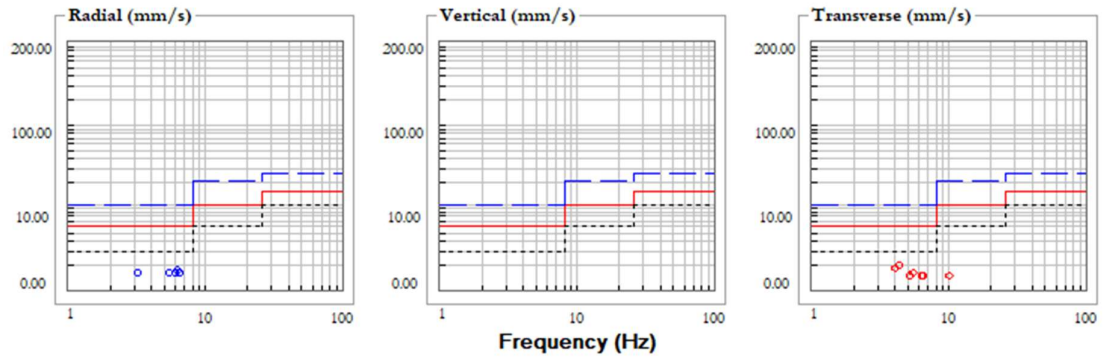


Figure 4.114 Frequency vs amplitude graph plotted at 650m distance.

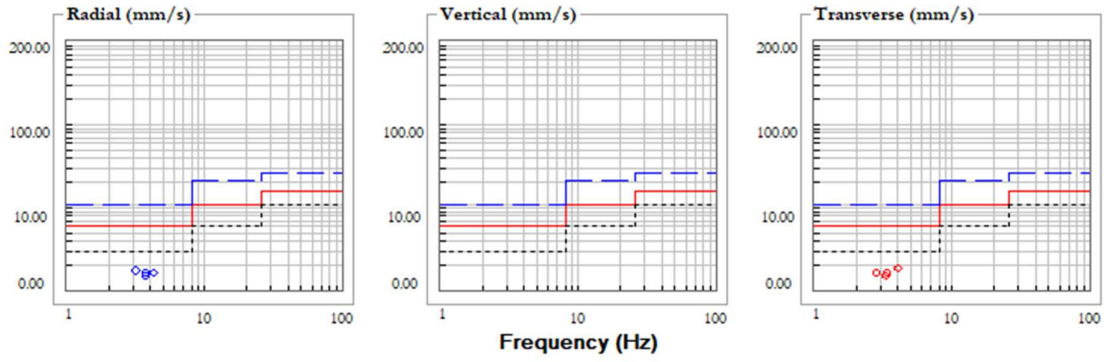


Figure 4.115 Frequency vs amplitude graph plotted at 700m distance.

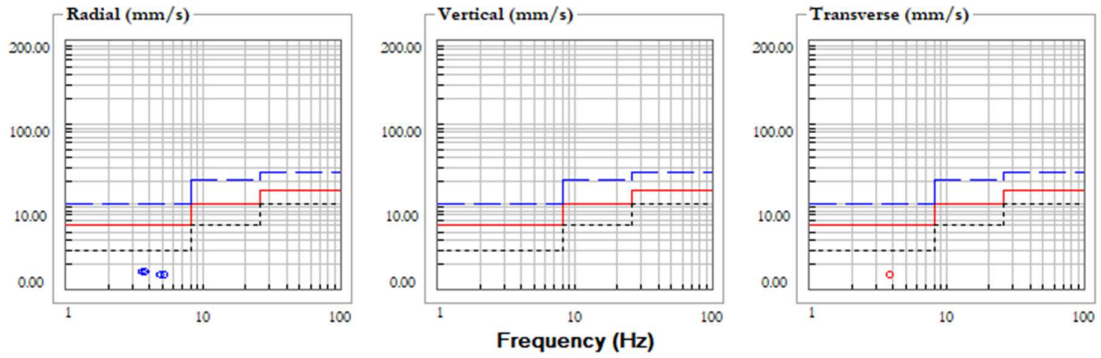


Figure 4.116 Frequency vs amplitude graph plotted at 750m distance.

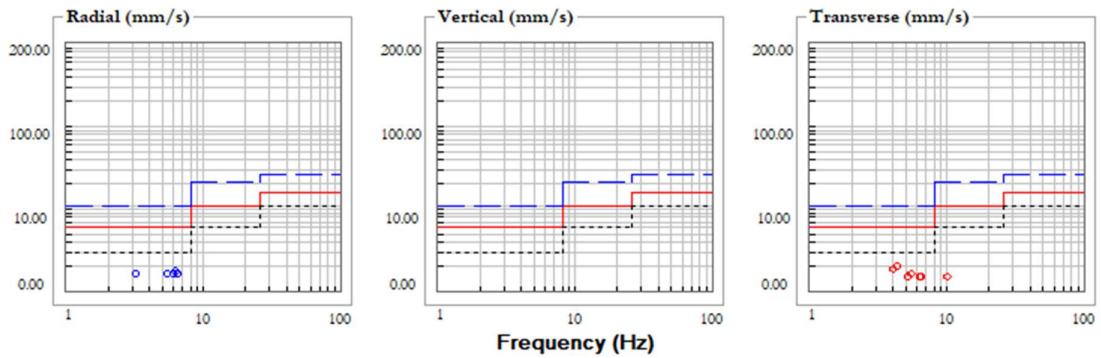


Figure 4.117 Frequency vs amplitude graph plotted at 800m distance.

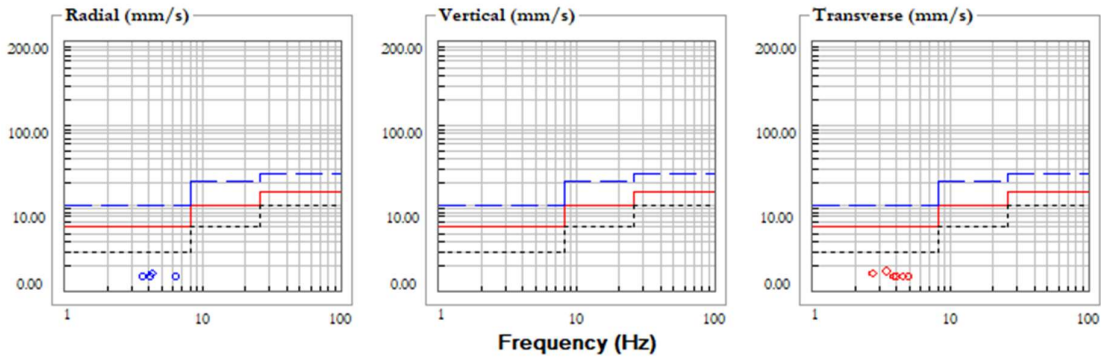


Figure 4.118 Frequency vs amplitude graph plotted at 850m distance.

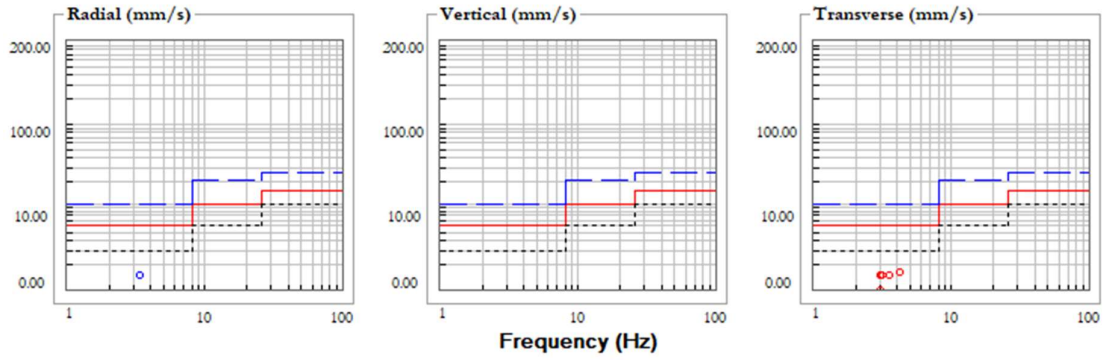


Figure 4.119 Frequency vs amplitude graph plotted at 900m distance.

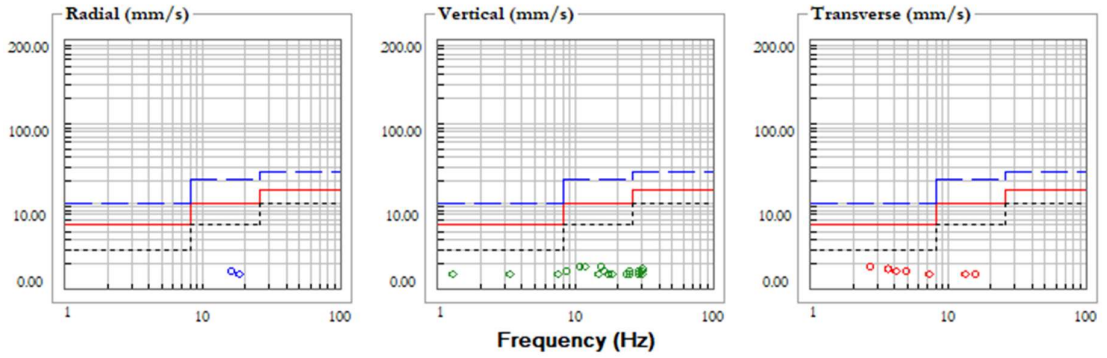


Figure 4.120 Frequency vs amplitude graph plotted at 950m distance.

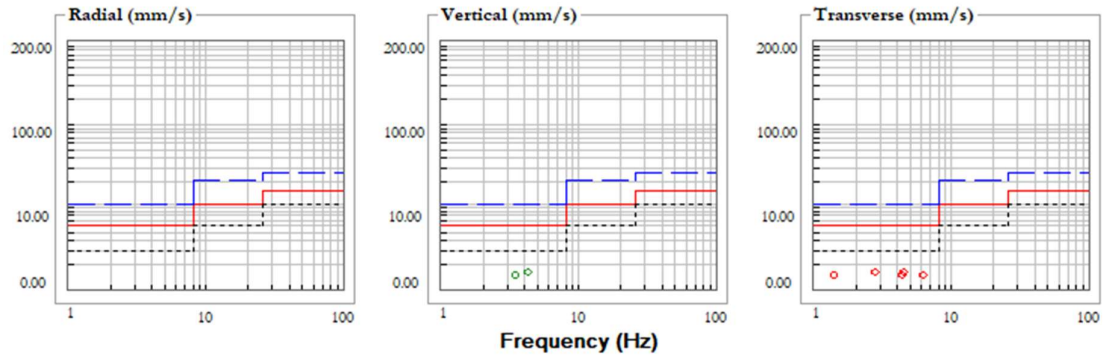


Figure 4.121 Frequency vs amplitude graph plotted at 1000m distance.

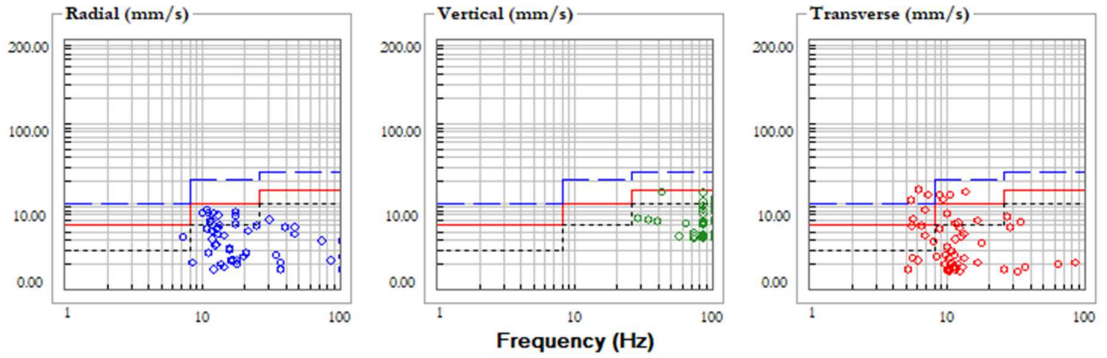


Figure 4.123 Frequency vs amplitude graph plotted at 100m distance.

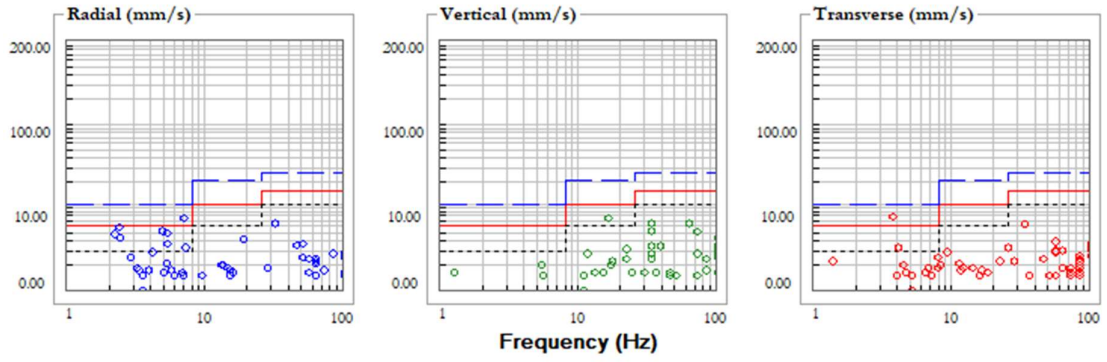


Figure 4.124 Frequency vs amplitude graph plotted at 150m distance.

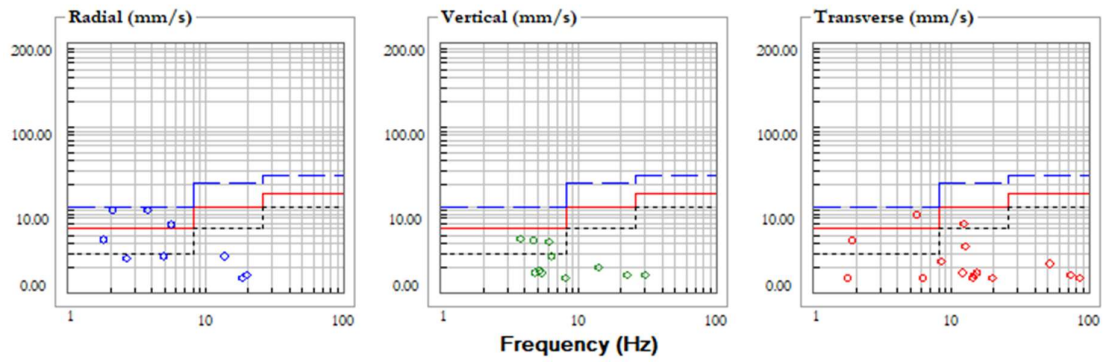


Figure 4.125 Frequency vs amplitude graph plotted at 200m distance.

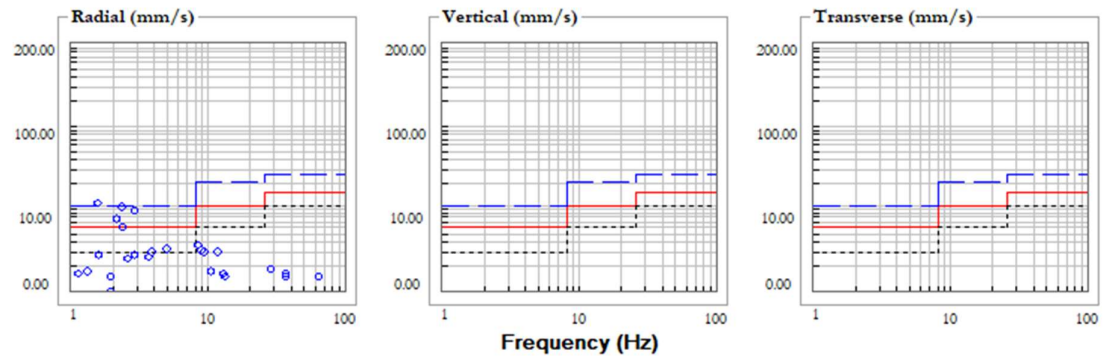


Figure 4.126 Frequency vs amplitude graph plotted at 250m distance.

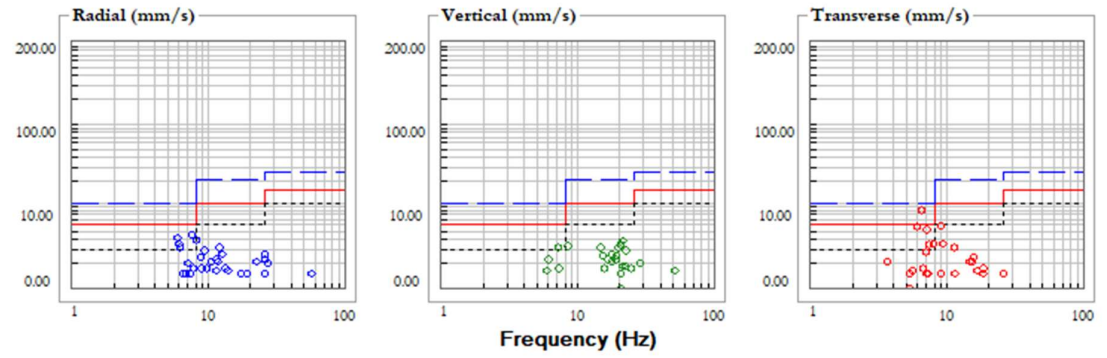


Figure 4.127 Frequency vs amplitude graph plotted at 300m distance.

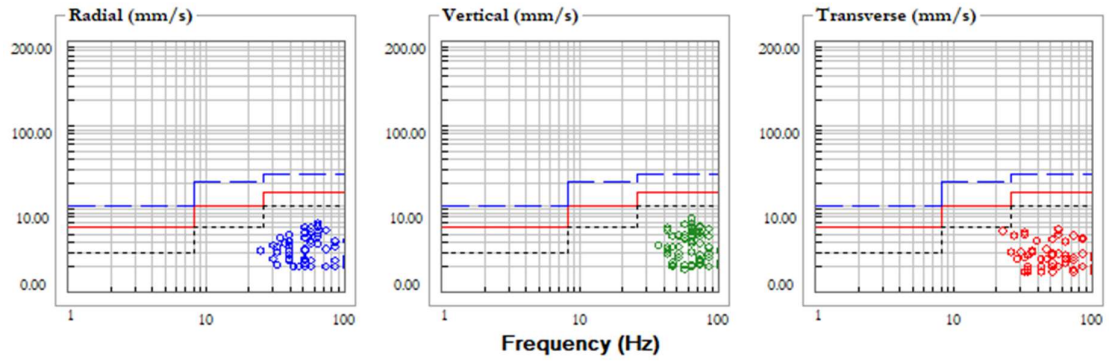


Figure 4.128 Frequency vs amplitude graph plotted at 350m distance.

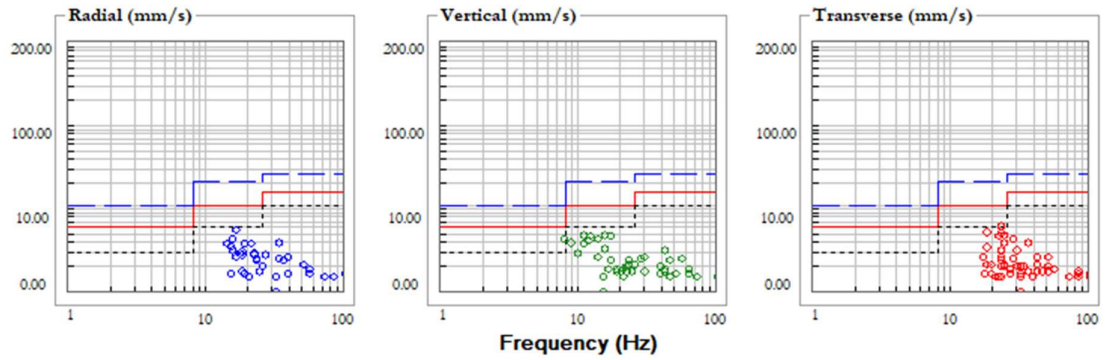


Figure 4.129 Frequency vs amplitude graph plotted at 400m distance.

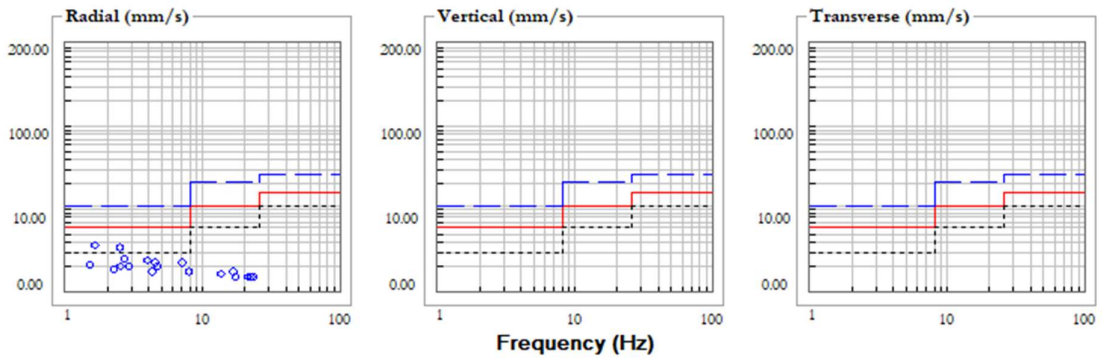


Figure 4.130 Frequency vs amplitude graph plotted at 450m distance.

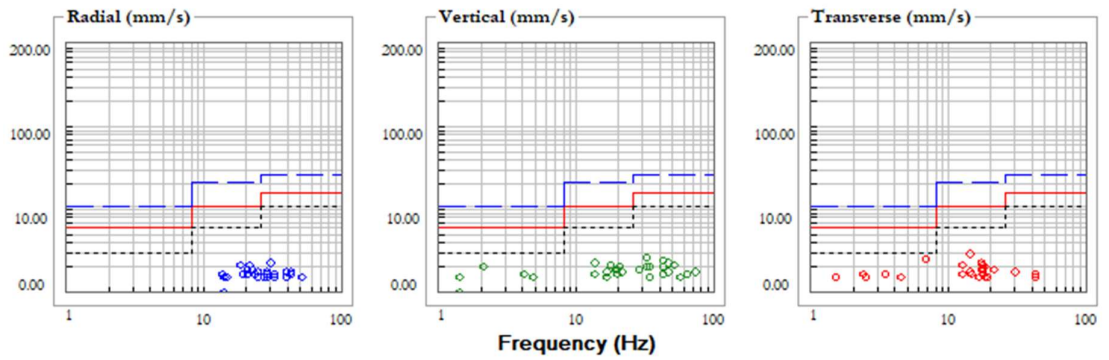


Figure 4.131 Frequency vs amplitude graph plotted at 500m distance.

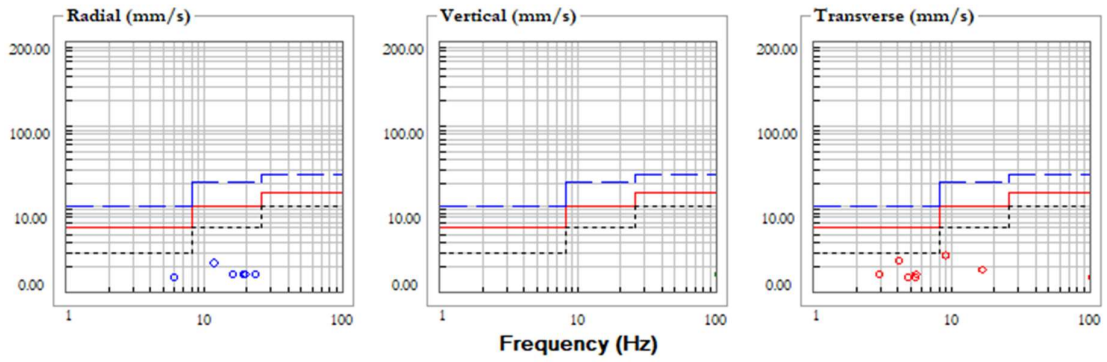


Figure 4.132 Frequency vs amplitude graph plotted at 550m distance.

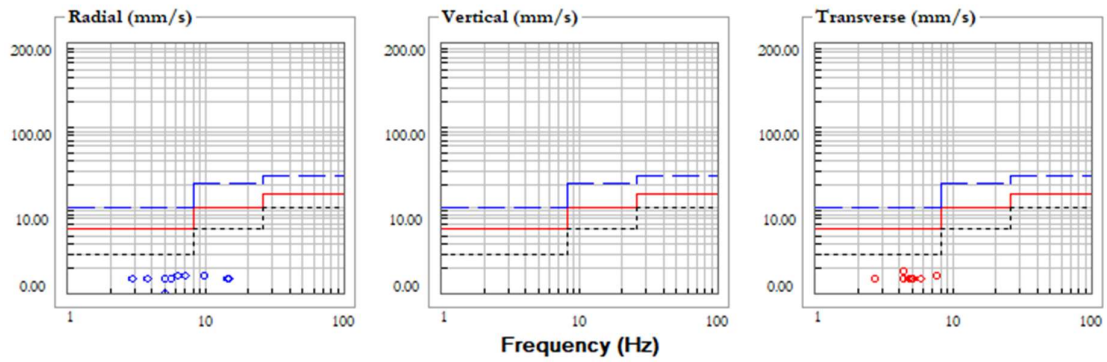


Figure 4.133 Frequency vs amplitude graph plotted at 600m distance.

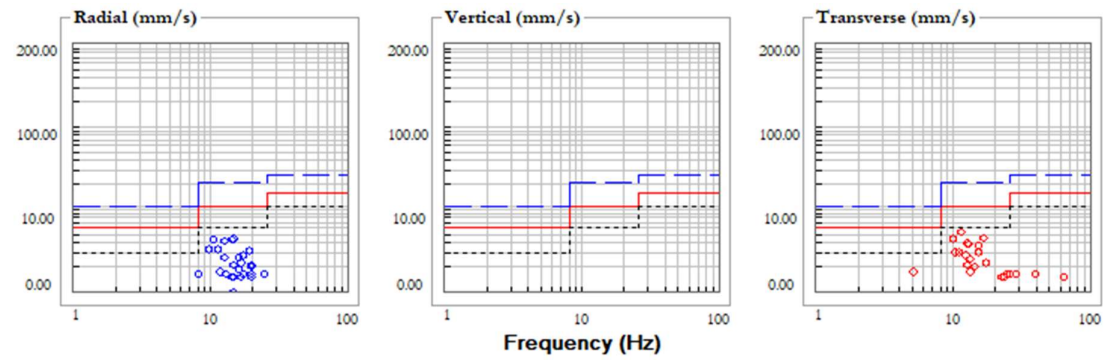


Figure 4.134 Frequency vs amplitude graph plotted at 650m distance.

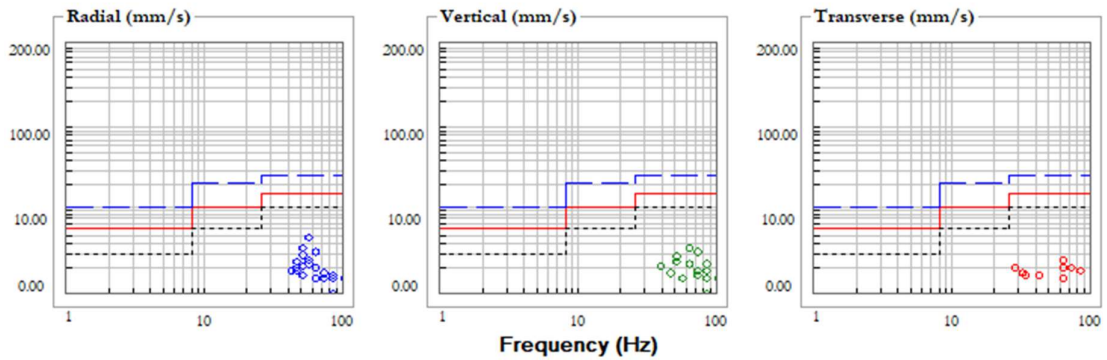


Figure 4.135 Frequency vs amplitude graph plotted at 700m distance.

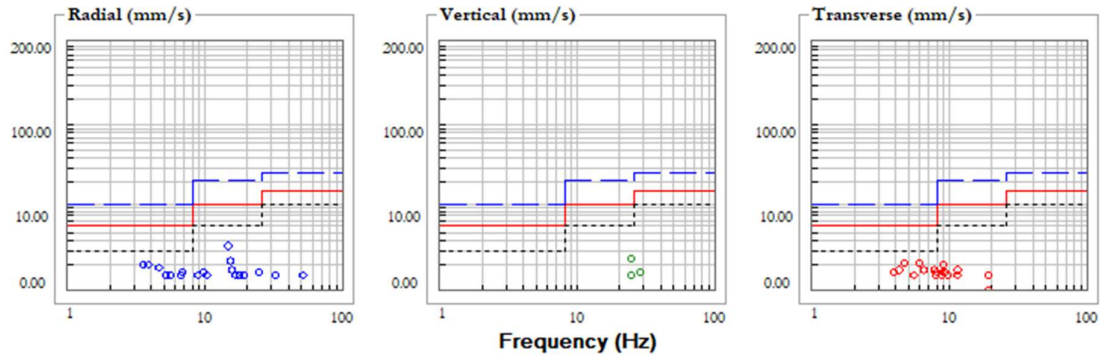


Figure 4.136 Frequency vs amplitude graph plotted at 750m distance.

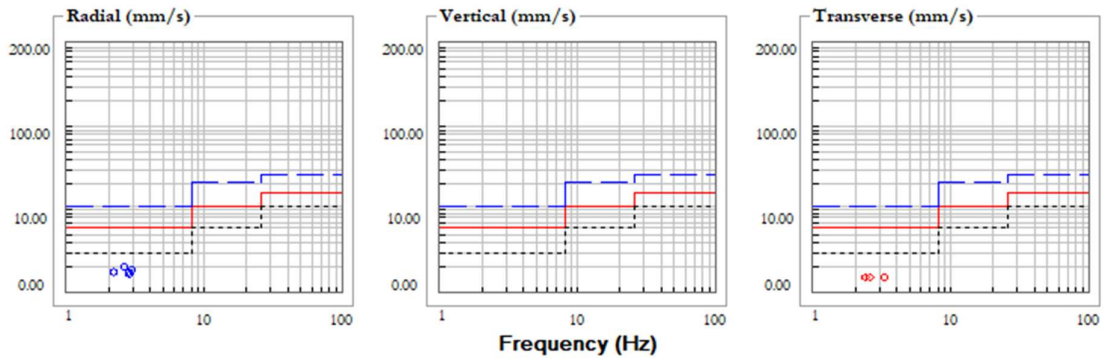


Figure 4.137 Frequency vs amplitude graph plotted at 800m distance.

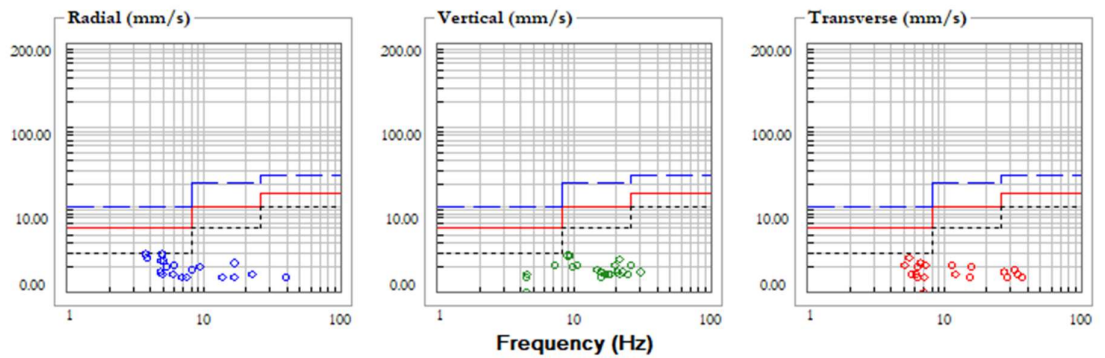


Figure 4.138 Frequency vs amplitude graph plotted at 850m distance.

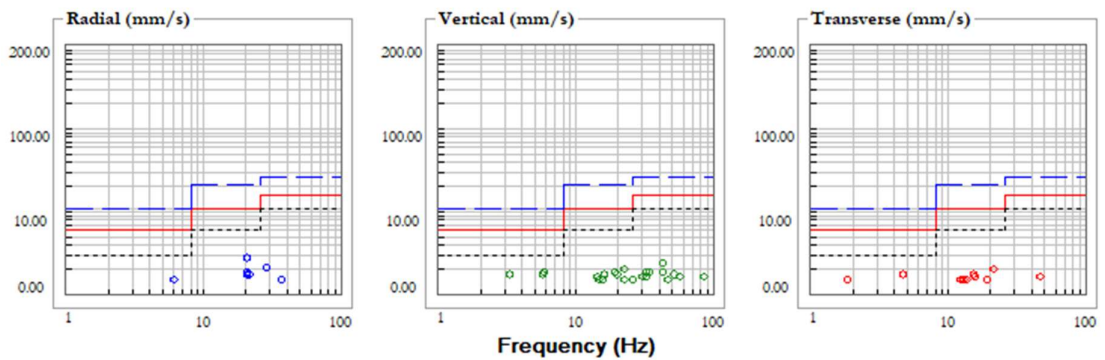


Figure 4.139 Frequency vs amplitude graph plotted at 900m distance.

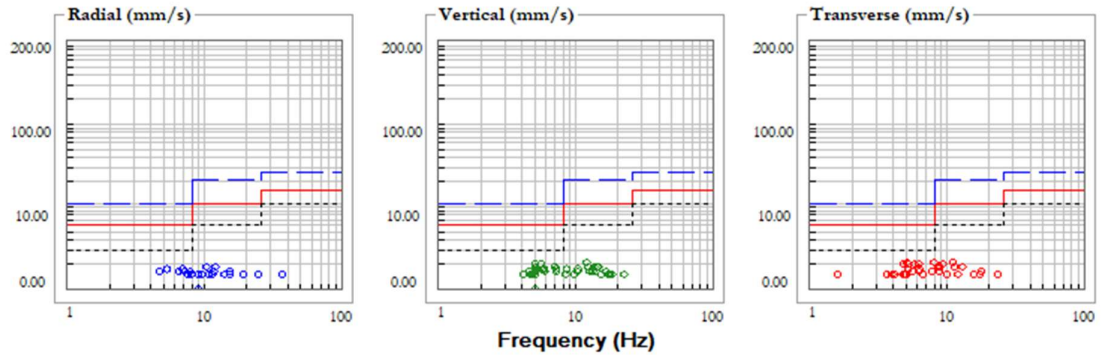


Figure 4.140 Frequency vs amplitude graph plotted at 950m distance.

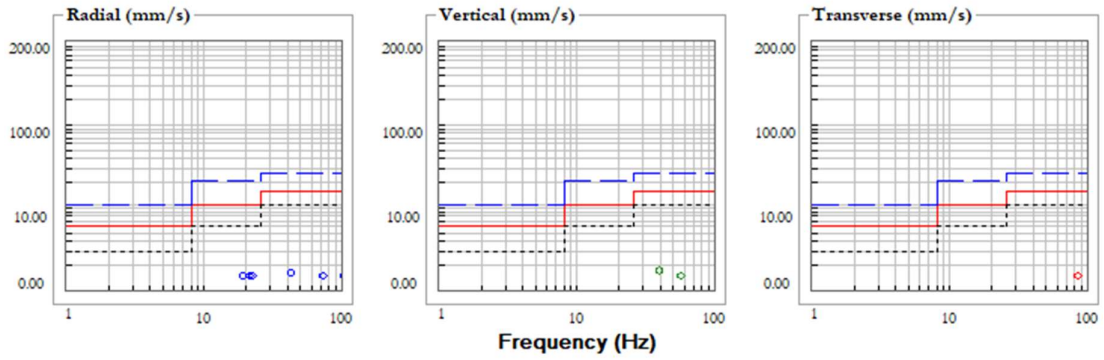


Figure 4.141 Frequency vs amplitude graph plotted at 1000m distance.

List of publications/ Accepted Articles

- i) Kumar, Anand, Pusker Singh, Sanjay Kumar Sharma, Nawal Kishore, and C. S. Singh. "Quantitative assessment of BIGV and structural response based on velocity and frequency around an opencast mine." *Current Science* 121, no. 2 (2021): 275.
- ii) Kumar, Anand, Sanjay Kumar Sharma, and Nawal Kishore. "Prediction of blast-induced ground vibration using multi-variate regression analysis in an opencast mine." *Journal of Mines, Metals and Fuels* 69, no. 7 (2021): 216-224.