

The basis for coupling the transducer is to ensure that it faithfully records the motion of the ground. The preferred coupling method depends on site conditions. Where there is a rigid surface (e.g., concrete or rock) adhesive or mechanical bonding can be used. Where the surface is soil, the transducer can be embedded or fixed to an embedded mount (for example, 200 mm concrete cube or similarly sized cylinder). If measurements are repeated at the same location, an embedded mount is particularly justified for consistency of results. Coupling with soil spikes in soft conditions may lead to exaggerated measurements and is not recommended.

Dictionary

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exaggerated

/ɪɡˈzædʒəreɪtɪd/

adjective

regarded or represented as larger, better, or worse than in reality.
"an exaggerated account of his adventures"

- enlarged or **altered beyond normal proportions**.
"comic book characters are drawn with exaggerated features so you will remember them"

Following an investigation of your application, I have been provided with the following documents and information relevant to your application:

Item 1: I have been advised that the "method used on permanent monitoring points are concrete block method as described in AS 2187-2, 2006. Appendix J3.2.2 i.e. 200mm x 200mm concrete block with monitoring sensor screwed into a plate which is attached to the block with epoxy. All monitors are soil spike type except for the following locations viz. #3 SSGD (29/1/15 onwards), Quarry Office (9/4/14 onwards) and Botanic Gardens (11/5/15 onwards)."

MCLR Observations of MCQ Seismic Blast Compliance Margin Monitoring:

Soil Spike transducer coupling monitoring is less accurate and results in compliance margin exaggeration. They are usually reserved for occasional field measurements and are always placed in aerated soft sandy soil, because the spikes bend or break-off in hard ground. Plus if repeated then they are used in the exact same location which further aerates and softens the soil, thereby decreasing the vibration coupling.

The much more-accurate embedded 200mm Concrete Block Transducer Mounting has never been allowed by the MCQ manager, at the main perpetual MCQ Sussex St monitoring location, plus also never at the popular Richer St monitoring location.

Following the November 2011 MCLR Whistle-Blower event, John Heilig personally installed the permanent 200mm concrete block at #3SSGD. However the MCQ manager disallowed the use of this existing transducer coupling block until 2015, when the MCLR accidentally saw this and lodged a complaint.

In 2020, 2021 and 2022, the MCQ Manager again disallowed the continued use of the 200mm concrete block at #3SSGD, with zero MCLR consultation or communication.