

**GEO Technical Guidance Note No. No. 18 (TGN 18)
Acceptance of Methods for Quality Control**

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1. **SCOPE**

- 1.1 This Technical Guidance Note (TGN) provides technical guidance for acceptance of new techniques for quality control of geotechnical works.
- 1.2 Any feedback on this TGN should be referred to Chief Geotechnical Engineer/Standards & Testing of the GEO.

2. **TECHNICAL POLICY**

- 2.1 The technical guidance promulgated in this TGN was agreed by the Geotechnical Control Conference (GCC) in February 2004.

3. **RELATED DOCUMENTS**

- 3.1 Nil.

4. **BACKGROUND**

- 4.1 New techniques are sometimes studied for their potential to assist in quality control. An example is the search for non-destructive tests on soil nails. At some point, it has to be decided whether to adopt the technique for general use as a tool for quality control.

5. **TECHNICAL RECOMMENDATION**

- 5.1 One criterion for assessing acceptability of new techniques for quality control should be the presence of a known consistent basis for the interpretation of test results, in addition to other considerations including reliability, scientific basis, limitations, etc.
- 5.2 The nature of a quality control tool is that depending on the outcome of tests, the tested work may have to be rejected. To be fair to the affected party, it has to be given the opportunity to appeal. An appeal is not meaningful unless there is a generally agreed way of viewing test outcomes, such that disagreements can be deliberated rationally and systematically.
- 5.3 A rational and systematic discussion of test outcome is possible only if the basis of interpretation is documented and available in a relatively consolidated form, i.e., known to users. It also requires that this basis is applicable to most cases in the same manner, and is applied by most informed users in the same way.

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- 5.4 The degree of consolidation of the information on the method of interpretation controls the demand on the training and experience of the parties who are qualified to deliberate on the interpretation of test results. The less the documentation, the more difficult it is to find persons capable of carrying out meaningful discussion. A method whose method of interpretation is not well documented would be more suitable for special cases than for general use.
- 5.5 If the basis of interpretation is personnel or case dependent, it is not consistent. It cannot support reasoned discussion.
- 5.6 The basis of interpretation can take a wide range of forms. At one end are accepted theories. At the other end are prescriptions at least in part based on experience. In between is the full spectrum of combinations of the two to various degrees. Whatever form it is in, the basis of interpretation should not be applied beyond the body of observations and experience from which the basis originated.

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