Electronic Transfer of

Geotechnical

and

Geoenvironmental Data

AGS4

(Edition 4.0)

Guidance Document

Reporting Trial Pits

ACKNOWLEDGEMENTS

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Comment and feedback from the wider geotechnical industry has also been fundamental to the ongoing evolution of the AGS Format, ensuring that the needs of the geotechnical and geoenvironmental industry and its clients continue to be met.

DOCUMENT HISTORY

Revision	Description	Date
0	First Issue	1 Mar 2011

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1 Scope

Trial Pits and Trenches can be a challenge to report in AGS data format as unlike boreholes they may have additional dimensions and details of strata that are difficult to replicate easily within the AGS Data Format. The AGS Data Format currently supports the provision of a one-dimensional summary log which in most cases would be supported by the inclusion of a diagram or sketch appended to the record; normally as an associated file attached to the HDPH record for the pit or trench.

2 Definitions

- LOCA Group   –   Location Details group

- GEOL Group   –   Stratum Descriptions group

- DETL Group   –   Stratum Detail Descriptions group

- SAMP Group   –   Sample Information group

- FILE_FSET   –   Associated file reference

- GEOL_STAT   –   Stratum reference field

- HDPH_DIML   –   Trial pit/ trench or logged traverse length field

- HDPH_DIMW   –   Trial pit/ trench or logged traverse width field

- HDPH_STAB   –   Stability of trial pit/trench or logged traverse field

- SAMP_REM   –   Sample remarks fields

3 Background

Trial pits or trenches where the geology encountered comprises uniform, horizontal layers can be reported in a borehole-type log format i.e. a one dimensional record of the underlying ground conditions, the only dimension being depth. These types of logs readily convert into the AGS Data Format. For trial pits or trenches where the geology is not in uniform, horizontal layers, the log will normally comprise a two or three dimensional diagram or sketch of the excavation faces to show the relative positions of the strata, as well as the location of any accompanying samples and in situ tests. The stratum descriptions will then usually be referenced to the sketch using the stratum number on the generic log. Such logs require some compromises to report them in the AGS Data Format.

4   Guidance

- In the AGS data file, trial pits and trenches in uniform strata are represented by data in the LOCA, HDPH and GEOL group at a minimum.

  Details of pit dimensions and stability are to be included in the HDPH group as follows:
  HDPH_DIML; Trial pit/ trench or logged traverse length
  HDPH_DIMW: Trial pit/ trench or logged traverse width
  HDPH_STAB: Stability of trial pit/trench or logged traverse) fields

  The GEOL group data comprises a record for each stratum. If samples or tests are taken in the excavation, then additional data groups would be required.

- AGS data files for trial pits and trenches in more complex strata require at minimum data in the following groups: LOCA, HDPH, GEOL and FILE. In additional a diagram showing the strata encountered in the pit would be attached as an associated file referenced in the HDPH group. This could take the form of a single diagram showing all pit faces or set of sketches one for each face. Additionally photographs could also be appended to the HDPH file set. The details of the associated file(s) would be defined in the FILE group.

  On the face diagram(s) each distinct stratum requires a stratum reference code (number or letter). This stratum reference code is included in the GEOL data (in GEOL_STAT) and used to link the sketch, the stratum descriptions and any samples taken from the excavation together as descried below.

  To produce GEOL data for pits or trenches in other than simple uniform, horizontal strata requires the development of a one-dimensional summary of the strata in the same vertical sequence that they are seen in the trial pit faces. The stratum boundary depths on this log should be "approximate average depths" for each stratum boundary, as seen in the trial pit faces. The depths should be chosen to be representative of the strata. Engineering judgment maybe applied to the choice of depths in so much that the depths should be representative of the assessed behaviour of the ground to the proposed use. This may be difficult to achieve where the strata boundaries are complex. However, every stratum must be included in the GEOL data, with some nominal thickness. Where strata are very limited in extent they could alternatively be included as a detail in the DETL group, rather than as a separate stratum in the GEOL group

  If this data is also to be also presented in an exploratory hole log format using log production software then the stratum code 'GEOL_STAT' should be prominently displayed at the start of, or adjacent to, each stratum description.

  Samples taken from the pit or trench are included in the SAMP group, however, the stratum reference code is required in the GEOL_STAT field of the SAMP group to indicate which stratum the sample has been taken from. If you also wish to indicate which face of the trial pit the sample was taken from, include this attribute as a remark in the SAMP_REM field.

  In situ CBR, density, redox, resistivity and vane tests can be carried out in a trial pit, rather than at the ground surface. The tests should be recorded in the relevant test group as normal, but also include the stratum code in GEOL_STAT field of the group to indicate which stratum the test was carried out in. If required, the trial pit face attribute should be given in the _REM field of the group.

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