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Soil quality — Vocabulary

AMENDMENT 1

Qualité du sol — Vocabulaire

AMENDEMENT 1

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This document was prepared by Technical Committee ISO/TC 190, *Soil quality*.

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Soil quality — Vocabulary

AMENDMENT 1

Subclause 2.2

Add the following new terms and definitions and renumber the following terms accordingly:

2.2.1
anthropogenic ground
deposits which have accumulated through human activity

Note 1 to entry: These could consist of natural materials placed/replaced by man, e.g. clay, or man-made materials, e.g. refuse.

2.2.3
deep soils
soils in which plants can achieve a rooting depth of 50 cm or more

2.2.9
fill
anthropogenic ground (2.2.1) in which the material has been selected, placed and compacted in accordance with an engineering specification

Note 1 to entry: The material can be natural in origin or comprise wastes or other artificial materials.

2.2.10
made ground
anthropogenic ground (2.2.1) comprising material placed without engineering control and/or manufactured by man in some way, such as through crushing or washing, or arising from an industrial process

Note 1 to entry: Can comprise mixed natural soil materials and/or wastes such as building rubble, timber, refuse and industrial wastes.

2.2.17
shallow soil
soil in which plants can achieve a rooting depth of less than 50 cm.

Subclause 3.4

Add the following new term and definition and renumber the following terms accordingly:

3.4.7
dense non-aqueous phase liquid
DNAPL
NAPL (3.6.11) denser than water

EXAMPLE Trichloroethene.

Note 1 to entry: For LNAPL, see 3.6.8.

Subclause 3.6

Replace definitions 3.6.5 and 3.6.7 with the following:

3.6.5
gas migration
movement of gas from the source through the ground to the adjoining strata or to emit to atmosphere

Note 1 to entry: EXAMPLES of sources include wastes within a landfill or spill of hydrocarbons.

3.6.7
gas sampling
collection of a volume of soil gas contained in the pore space of the soil

Add the following new terms definitions:

3.6.8
light non-aqueous phase liquid
LNAPL
NAPL (3.6.11) less dense than water

Note 1 to entry: For DNAPL, see 3.4.7.

Replace definition 3.6.9 with the following:

3.6.9
lower explosive limit
LEL
lowest volume fraction of a mixture of flammable gas with air which will propagate an explosion in a confined space at 25°C and atmospheric pressure

Note 1 to entry: LEL can be expressed as a percentage or in mg/l or similar units.

Note 2 to entry: For UEL, see 3.6.22.

Add the following new terms definitions:

3.6.10
monitoring installation
permanent or temporary device used for soil gas sampling

EXAMPLE Sub-slab, soil gas probe.

3.6.11
non-aqueous phase liquid
NAPL
liquid organic substance which is relatively insoluble in water

Note 1 to entry: For DNAPL, see 3.4.7.

Note 2 to entry: For LNAPL, see 3.6.8.

Replace definitions 3.6.10 and 3.6.12 with the following, considering the new numbering:

3.6.13
passive soil-gas sampling
sampling based on the adsorption of gases of the ground on an adsorbent placed in the ground, without using artificially reduced pressure

3.6.14
soil gas monitoring device
soil gas monitoring installation
borehole finished with suitable material for stabilisation of the borehole wall and/or for limiting the sampling area

Note 1 to entry: Depending on the type and stability of fitting, a distinction is made between temporary (for single or short-term repeated soil sampling) and stationary and semi-permanent or permanent soil gas monitoring points (for long-term observation).

Add the following new terms and definitions and renumber accordingly:

3.6.17
soil gas sample volume
volume of soil gas taken to form the sample

3.6.19
sub-slab sampling location
soil gas sampling location just below the foundation slab of a building, within the unsaturated zone

3.6.20
subsoil
<soil gas> layer of soil beneath the surface soil and overlying the bedrock

Note 1 to entry: Subsoil is also known as "undersoil".

3.6.22
upper explosive limit
UEL
uppermost volume fraction of a mixture of flammable gas with air which will propagate an explosion in a confined space at 25 °C and atmospheric pressure

Note 1 to entry: UEL can be expressed as a percentage or in mg/l or similar units.

Note 2 to entry: For LEL, see 3.6.9.

Subclause 4.1

Replace definition 4.1.8 with the following:

4.1.8
increment
material forming part of a composite sample obtained by a single operation of a sampling device

EXAMPLE The filling of a scoop or auger.

Add the following new term and definition and renumber the following ones accordingly:

4.1.13
population
<soil sampling> entirety of a soil volume or mass about which information is to be sought via sampling

EXAMPLE The entirety could be e.g. particular site, in situ volume of soil, stockpile, truck load.

Replace definition 4.1.34 with the following considering the new numbering:

4.1.35
subsample
selected part of a sample

Note 1 to entry: The subsample can be selected by the same method as was used in selecting the original sample, but need not be so.

[SOURCE: ISO 3534-2:2006, 1.2.19]

Subclause 4.2

Add the following new terms and definitions:

4.2.1
above-ground sampling
process of taking samples from material that has been deposited on the ground surface

EXAMPLE Samples are taken from a stockpile (including bulk volumes of excavated soils), deposit of waste or embankment.

4.2.2
in-ground sampling
process of taking samples from the ground surface and/or within the ground beneath the surface

Replace definition 4.2.1 with the following considering the new numbering:

4.2.3
cluster sample
composite sample for which the increments are taken over a small area around a predefined sampling point

Note 1 to entry: Sampled area is typically about 0,5 m^2 to 1,0 m^2.

Note 2 to entry: Material sampled is taken from within the same stratum or from material with the same characteristics.

Add the following new terms and definitions and renumber the following accordingly:

4.2.4
composite sample
<field> sample made of a number of increments

Note 1 to entry: See *cluster sample* (4.2.3) or *spatial composite sample* (4.2.28).

4.2.6
convenience sampling
process of taking samples based on accessibility, expediency, cost, efficiency, or other reason not directly concerned with sampling parameters

Note 1 to entry: The samples can be taken to a predetermined plan (locations, depths etc.) or taken from locations and/or depths decided on site (the term “ad hoc sampling” is sometimes applied to this type of sampling).

Replace definition 4.2.4 with the following considering the new numbering:

4.2.8
judgemental sampling
process of taking samples from particular zones or features of a site taking into account existing knowledge.

Note 1 to entry: Judgemental sampling could be required, for example, around underground storage tanks or pipelines where there might have been leaks, above ground storage tanks where there might have been spills, and for areas where raw materials or wastes have been stored or deposited.

Note 2 to entry: Sampling locations are usually predetermined based on what is known about the target area but some locations can be selected in the field in response to on-site observations.

Add the following new term and definition:

4.2.9
kubiëna tin
metal box with removable top and base which can be forced into the surface of the ground to obtain an *undisturbed sample* (4.4.33)

Note 1 to entry: Usually made to desired size from aluminium, galvanized steel, or stainless steel sheet. Size varies, but a typical example might have an area of about 55 mm × 75 mm with a depth of 40 mm. The sample, once obtained, can be used to determine bulk density or can be impregnated with resin prior to the production of thin sections for microscopic examination.

4.2.15
principal sampling situation
one of four sampling situations characterised by a combination of whether information is required on spatial distribution or average properties, with whether *in-ground sampling* (4.2.2) or *above-ground sampling* (4.2.1) is required.

Note 1 to entry: The concept is illustrated in ISO 18400-104: 2018, Table 2.

Replace definition 4.2.10 with the following considering the new numbering:

4.2.16
probabilistic sampling
sampling to ensure that each particle or element in the population has an equal chance of being part of the sample

Note 1 to entry: This means it is easy to obtain a quantifiable level of reliability (or uncertainty) in the estimated mean value and enables estimation of variability of the results for the population being tested.

Add the following new terms and definitions considering the new numbering:

4.2.17
regular sampling
process of taking samples at the nodes of a regular pattern, such as a square or triangular grid, i.e. the sampling locations are evenly spaced