DIN EN ISO 18557:2020-06 (E)

Characterisation principles for soils, buildings and infrastructures contaminated by radionuclides for remediation purposes (ISO 18557:2017)

Contents

Page

European foreword ... **4**

Foreword ... **5**

Introduction ... **6**

1 Scope ... **9**

2 Normative references ... **9**

3 Terms and definitions ... **9**

4 Strategy applied to the remediation of contaminated sites ... **14**
4.1 Principle ... 14
4.2 Characterization and remediation objectives ... 16
4.3 Historical analysis ... 17
4.4 Documents ... 17
4.5 Interviews ... 17
4.6 Functional analysis ... 18
4.7 Preliminary characterization ... 18
4.8 Definition of the zones of interest and contamination tracers ... 18
4.9 Surface and/or volumetric characterization program ... 19
4.10 Data processing and contamination assessment ... 20
4.11 Conformity of the results to the characterization objectives ... 21
4.12 Remediation programme ... 21
4.13 Final characterization ... 23

5 Surface characterization programme ... **24**
5.1 Principle ... 24
5.2 Non-destructive analysis ... 26
5.2.1 Characterization programme: Determination of the sampling design and the number of data points ... 26
5.2.2 Implementation ... 26
5.3 Destructive analysis ... 27
5.3.1 Characterization programme ... 27
5.3.2 Implementation and laboratory analyses ... 27
5.4 Preliminary consolidation ... 27
5.5 Data processing ... 28
5.5.1 Spatial structure of the phenomenon ... 28
5.5.2 Data processing in the case of spatially structured contaminations ... 28
5.5.3 Result mapping in the case of spatially structured contaminations ... 28
5.5.4 Statistical processing in the case of non-structured contaminations ... 28
5.6 Conformity of the results with the characterization objective ... 29
5.7 Surface characterization file ... 29

6 Volumetric characterization programme ... **29**
6.1 Principle ... 29
6.2 Volumetric investigations ... 31
6.2.1 Characterization programme ... 31
6.2.2 Implementation and laboratory analyses ... 31
6.3 Preliminary consolidation ... 31
6.4 Volumetric Data processing ... 32

6.4.1 Case of structured contaminations 32
6.4.2 Case of non-structured contaminations 32
6.5 Compatibility of the results with the objectives 32
6.6 Volumetric characterization file 32

7 Final characterization programme 33
7.1 Principle 33
7.2 Final characterization programme 33
7.3 Processing the final characterization results 34
7.4 Final characterization file 35

8 Final report 35

Annex A (informative) **Geostatistical data processing and examples of good practices 36**

Bibliography 40