

ISO 18557:2017-09 (E)

Characterisation principles for soils, buildings and infrastructures contaminated by radionuclides for remediation purposes

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Strategy applied to the remediation of contaminated sites	6
4.1	Principle	6
4.2	Characterization and remediation objectives	8
4.3	Historical analysis	9
4.4	Documents	9
4.5	Interviews	9
4.6	Functional analysis	10
4.7	Preliminary characterization	10
4.8	Definition of the zones of interest and contamination tracers	10
4.9	Surface and/or volumetric characterization program	11
4.10	Data processing and contamination assessment	12
4.11	Conformity of the results to the characterization objectives	13
4.12	Remediation programme	13
4.13	Final characterization	15
5	Surface characterization programme	16
5.1	Principle	16
5.2	Non-destructive analysis	18
5.2.1	Characterization programme: Determination of the sampling design and the number of data points	18
5.2.2	Implementation	19
5.3	Destructive analysis	19
5.3.1	Characterization programme	19
5.3.2	Implementation and laboratory analyses	19
5.4	Preliminary consolidation	20
5.5	Data processing	20
5.5.1	Spatial structure of the phenomenon	20
5.5.2	Data processing in the case of spatially structured contaminations	20
5.5.3	Result mapping in the case of spatially structured contaminations	20
5.5.4	Statistical processing in the case of non-structured contaminations	20
5.6	Conformity of the results with the characterization objective	21
5.7	Surface characterization file	21
6	Volumetric characterization programme	21
6.1	Principle	21
6.2	Volumetric investigations	24
6.2.1	Characterization programme	24
6.2.2	Implementation and laboratory analyses	24
6.3	Preliminary consolidation	24
6.4	Volumetric Data processing	25
6.4.1	Case of structured contaminations	25

6.4.2	Case of non-structured contaminations	25
6.5	Compatibility of the results with the objectives	25
6.6	Volumetric characterization file	25
7	Final characterization programme	27
7.1	Principle	27
7.2	Final characterization programme	27
7.3	Processing the final characterization results	28
7.4	Final characterization file	29
8	Final report	29
	Annex A (informative) Geostatistical data processing and examples of good practices	31
	Bibliography	35