

ISO 18400-203:2018 (E)

Soil quality — Sampling — Part 203: Investigation of potentially contaminated sites

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Objectives
4.1	General
4.2	Definitions of objectives
5	General strategy of site investigation
5.1	General
5.2	Scope of preliminary investigation
5.3	Scope of exploratory investigation
5.4	Scope of detailed site investigation
6	Preliminary investigation
6.1	General
6.2	Development of the conceptual site model
6.2.1	Overall conceptual site model
6.2.2	Formulation of contamination-related hypotheses
6.3	Reporting the preliminary investigation and the conceptual site model
7	Design of intrusive investigations
7.1	Overview
7.2	General aspects of field work
7.3	Overall design aspects
7.3.1	General
7.3.2	Design of site works
7.3.2.1	Planning
7.3.2.2	Integrated investigations
7.4	Sampling patterns and spacing for sampling soils
7.4.1	General
7.4.2	Judgemental sampling
7.4.3	Systematic sampling
7.4.4	Detection of hotspots
7.4.5	Depth of sampling and the strata to be sampled
7.4.6	Sample sizes
7.4.7	Sample types
7.4.8	Number of samples
7.5	Analytical and testing strategies
7.5.1	General
7.5.2	Analysis of soil samples
7.5.2.1	Approaches to deciding on components to be analysed
7.5.2.2	Selecting parameters for testing and analysis
7.5.2.3	Using separate or laboratory composite samples
7.5.2.4	Storage and transport of samples
7.6	Quality assurance and quality control

- 8 Exploratory investigation**
 - 8.1 General**
 - 8.1.1 Basis of the exploratory investigation**
 - 8.1.2 Steps to be incorporated**
 - 8.1.3 Aspects to be considered when drawing up a strategy**
 - 8.2 Sampling strategy**
 - 8.2.1 General**
 - 8.2.2 Sampling locations**
 - 8.2.3 Depth of sampling**
 - 8.2.4 Selection of soil samples for analysis**
 - 8.2.5 Selecting parameters for testing and analysis**
 - 8.3 Evaluation of the exploratory investigation**
 - 8.3.1 Testing the hypotheses formulated during the preliminary investigation**
 - 8.3.2 Risk assessment**
 - 8.3.3 Considering hypotheses by zone**
 - 8.3.4 Obtaining information on soil quality**
 - 8.3.5 Checking if investigation strategy is adequate**
 - 8.3.6 Re-examining the hypotheses**
 - 8.3.7 Examples indicating if the hypothesis should be revised or rejected**
 - 8.3.8 Possible actions if a hypothesis is not valid**
 - 8.4 Reporting the exploratory investigation**
 - 8.5 Determination of the need for a detailed site investigation**
- 9 Detailed site investigation**
 - 9.1 General**
 - 9.2 Objectives and scope**
 - 9.2.1 Objectives**
 - 9.2.2 Major aspects to be considered in setting the scope and determining the objectives**
 - 9.3 Investigation design**
 - 9.4 Sampling strategy**
 - 9.4.1 General**
 - 9.4.2 Sampling locations**
 - 9.4.3 Depth of sampling**
 - 9.4.4 Selecting parameters for testing and analysis**
 - 9.5 Evaluation of the detailed site investigation**
 - 9.6 Reporting**
- Annex A (informative) Contamination hypotheses**
 - A.1 General**
 - A.2 Hypothesis of a “probably uncontaminated” site or zone**
 - A.3 Hypothesis of a “probably contaminated” site**
 - A.4 Hypotheses relating to spatial distribution of contamination**
 - A.4.1 Types of spatial distribution of contamination**
 - A.4.2 Heterogeneous versus homogeneous distribution**
- Annex B (informative) Methods of non-intrusive investigation**