
CONTENTS

Environmental sampling – Soil Sampler Education Volume 4 of 5

Preface i

Chapter 1	1
Introduction	1
1.1 Sampling of soil – general background	1
1.2 Representative sampling	2
1.3 Regulatory requirements	3
Chapter 2	7
Basic knowledge of soil and type of sampling	7
2.1 Soil characteristics	7
2.2 Sampling from contaminated sites	11
2.3 Sampling from soil stockpiles	12
Chapter 3	15
Reading and understanding a sampling plan	15
3.1 Objectives of sampling	15
3.2 Sampling target	23
3.3 Quality objectives	23
3.4 Sampling location	23
3.5 Identification of critical conditions	25
3.6 Role of the parties involved in sampling	26
Chapter 4	29
Sampling methods	29
4.1 Principles of sampling	29
4.2 Sampling equipment	30
4.3 Preparation for sampling	36
Chapter 5	39
Sampling on site	39
5.1 Identification of sampling location	39
5.2 Performing sampling	40
5.3 Measurements during sampling	46
5.4 Subsampling	46
Chapter 6	49
Sample handling	49
6.1 Handling and packaging	49
6.2 Transportation and storage	50

Chapter 7	53
Documentation.....	53
7.1 Sampling identification	53
7.2 Sample labelling	53
7.3 Field report	54
7.4 Chain of custody report	54
7.5 Writing sampling reports	54
7.6 Archiving	55
 Chapter 8	 57
Validation and quality control of sampling.....	57
8.1 Sampling quality requirements	57
8.2 Preparing for sampling	58
8.3 Sampling validation	58
8.4 Sampling quality control	61
8.5 Evaluation of sampling uncertainty	63
8.6 Expression and reporting of sampling uncertainty	63
 Chapter 9	 67
Health and safety	67
9.1 Health and safety issues	67
9.2 Safety equipment and hazards	67
9.3 Best practice of hygiene and safety	71
 Chapter 10	 73
Glossary.....	73
10.1 Glossary references	83
 Chapter 11	 85
References	85
 Appendices	 87
A.1 Maximum storage time for soils under different conditions – physical and chemical test objectives (ISO 18512)	87
A.2 Maximum storage times for soils under different conditions – biological test objectives (ISO 18512)	89
A.3 Field report	91
A.4 Chain of custody report	93
A.5 Sampling report	95