

TABLE OF CONTENTS

This is a Summary Table of Contents.

Each chapter is preceded by its individual detailed Table of Contents

<i>Table of Contents</i>	<i>Contents</i>	<i>i</i>
<i>Acronyms and Abbreviations</i>	<i>Acronyms</i>	<i>i</i>
<i>Glossary of Terms</i>	<i>Glossary</i>	<i>i</i>
<i>List of Internet Sites [available electronically at http://resources.stpub.com]</i>		

CHAPTER 1 INTRODUCTION

A. Overview	1A-1
A.1 Purpose	1A-1
A.2 Background	1A-7
A.3 Site Assessment Sequencing	1A-12
A.4 Summary	1A-17
B. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)	1B-1
B.1 Defining Hazardous Substances	1B-3
B.2 Notification of Contamination	1B-4
B.3 Superfund Response Process	1B-5
B.4 The Superfund	1B-14.1
B.5 Liability	1B-15
B.6 Authority	1B-32
Do's and Don'ts	1B□-1
C. RCRA Corrective Action Program	1C-1
C.1 Statutory Authority	1C-3
C.2 Entering a Facility into Corrective Action	1C-4
C.3 State Authorization	1C-5
C.4 Implementing Corrective Action	1C-6
C.5 Government Performance and Results Act and RCRA Corrective Action Goals	1C-14
C.6 RCRA Cleanup Reforms	1C-16
C.7 Ongoing RCRA Corrective Action Program Evolution	1C-19
Do's and Don'ts	1C□-1

D. Brownfields	1D-1
D.1 CERCLA Brownfields	1D-2
D.2 Other Federal Brownfields Programs	1D-23
D.3 State and Tribal Brownfields Initiatives	1D-26
D.4 Environmental Insurance	1D-28
D.5 Environmental Justice	1D-29
D.6 Conclusion	1D-31

E. Other Relevant Laws	1E.1-1
E.1 The Resource Conservation and Recovery Act Overview	1E.1-1
E.2 Regulation of Underground Storage Tanks	1E.2-1
E.3 Federal Clean Air Act	1E.3-1
E.4 Water Pollution Control	1E.4-1
E.5 SARA Title III	1E.5-1

CHAPTER 2

DUE DILIGENCE

Introduction	2-1
1 All Appropriate Inquiries and ASTM Standards	2-4
2 Strict, Joint, Several, and Retroactive Liability	2-7
3 Parties Impacted by CERCLA	2-8
4 Negotiating the Transfer of Problem Properties	2-13
Do's and Don'ts	2□-1

CHAPTER 3

PHASE I: ENVIRONMENTAL SITE ASSESSMENT

Introduction	3-1
A. Conducting the Phase I Environmental Site Assessment/All Appropriate Inquiries	3A-1
A.1 Objectives and Performance Factors	3A-3
A.2 Delineation of AAI responsibilities	3A-5
A.3 Timeliness of AAI Information	3A-8
A.4 Records Review	3A-9
A.5 Visual Inspection	3A-23
A.6 Interviews	3A-38
A.7 Additional Inquiries	3A-43
A.8 AAI Final Report: Documentation of Environmental Conditions	3A-45
A.9 Non-Scope Considerations	3A-53
A.10 After Completion of the Phase I ESA/AAI	3A-54
Do's and Don'ts	3A□-1

B. A Guide to Consultants Performing the Phase I ESA	3B-1
B.1 Proposal Preparation	3B-2
B.2 The Contract	3B-5
B.3 Project Management	3B-10
B.4 The Final Report	3B-20
B.5 The Project Postmortem	3B-21

Do's and Don'ts	3B□-1
-----------------	-------

CHAPTER 4
PHASE II: SITE INVESTIGATION

Introduction	4-1
--------------	-----

A. Conducting the Phase II Site Investigation	4A-1
A.1 Define the Site Boundary and Investigation Objectives	4A-3
A.2 Review Existing Information	4A-4a
A.3 Anticipate Site Limitations	4A-4b
A.4 Detailed Site Drawing	4A-8
A.5 Site Contaminants	4A-8
A.6 Developing the Sampling Strategy	4A-20
A.7 Methods of Investigation	4A-23
A.8 Site Investigation Workplan	4A-24
A.9 Health and Safety Plan	4A-25
A.10 Final Considerations for Implementing the Site Investigation	4A-27
A.11 Field Procedures and Sample Collection Techniques	4A-28
A.12 Waste Disposal	4A-50
A.13 Evaluating the Data	4A-52
A.14 Interpreting Test Results	4A-52
A.15 The Site Investigation Report	4A-59
A.16 After Completion of the Phase II Site Investigation	4A-62
A.17 Additional Concerns	4A-63

Do's and Dont's	4A□-1
-----------------	-------

B. A Guide to Consultants Performing the Phase II SI	4B-1
B.1 Proposal Preparation—Deciding Whether to Bid	4B-3
B.2 The Proposal	4B-6
B.3 The Contract	4B-7
B.4 Project Management	4B-12
B.5 The SI Report	4B-19
B.6 The Project Postmortem	4B-20

Do's and Don'ts	4B□-1
-----------------	-------

CHAPTER 5

PHASE III: CERCLA CLEANUP PROCESS AND RCRA CORRECTIVE ACTION

Introduction	5-1
A. Superfund Remedial Investigation/Feasibility Study	5A-1
A.1 Scoping	5A-3
A.2 Site Characterization	5A-9
A.3 Development and Screening of Alternatives	5A-24
A.4 Treatability Studies	5A-39
A.5 Detailed Analysis of Alternatives	5A-40
A.6 RI/FS Communication and Reporting	5A-41
Do's and Don'ts	5A□-1
B. RCRA Corrective Action: RCRA Facility Investigation and Corrective Measures Study	5B-1
B.1 Planning Flexible, Focused, Results-Based Corrective Action	5B-4
B.2 Site Characterization	5B-9
B.3 Corrective Measures Study	5B-13
B.4 Managing Corrective Action Wastes	5B-18
B.5 RFI/CMS Communication and Reporting	5B-20
Do's and Don'ts	5B□-1
C. A Guide for Consultants Performing the Phase III (RI/FS or RFI/CMS)	5C-1
C.1 Proposal Preparation—Deciding Whether to Bid	5C-3
C.2 Control of the Phase III RI/FS	5C-7
C.3 The Proposal	5C-11
C.4 The Contract	5C-13
C.5 Project Management	5C-20
C.6 Project Deliverables	5C-34
C.7 The Project Postmortem—Closure, Post-Closure, and Certification	5C-37
Do's and Don'ts	5C□-1

**CHAPTER 6
CONSULTANT LIABILITIES**

A. Nature of The Risk—Why are Environmental Assessments “Different”? 6-1

B. Risk Management Strategies 6-3

B.1 Risk Avoidance 6-3

B.2 Risk Minimization 6-5

B.3 Transfer 6-10

C. Special Problems 6-12

C.1 Third Party Reliance 6-12

C.2 Certificates and Warranties 6-13

C.3 Disclosure of Hazardous Conditions 6-14

D. Other Sources of Information 6-14

Do’s and Don’ts 6-1

**CHAPTER 7
EMINENT DOMAIN AND CONTAMINATED
PROPERTIES**

7.1 The Power of Eminent Domain 7-2

7.2 Environmental Assessment in the Acquisition Process 7-7

7.3 Property Owner’s Liability 7-16

**CHAPTER 8
RADIOACTIVE MATERIALS IN THE ENVIRONMENTAL
ASSESSMENT PROCESS:
ANTICIPATING TECHNOLOGICALLY ENHANCED
NATURALLY OCCURRING RADIOACTIVE MATERIALS**

8.1 Introduction 8-1

8.2 The Mechanics of Radioactivity 8-3

8.3 The History of Radioactive Materials 8-6

8.4 Background Radioactivity 8-9

8.5 Concentrating NORM—Generating TENORM 8-12

8.6 Laws Regarding TENORM 8-17

8.7 Addressing TENORM in the Environmental Assessment Process 8-23

8.8 Radon 8-31

8.9 Liability Considerations 8-34

Do’s and Don’ts 8-1

Table 1: Average Concentration measurements of TENORM in Various Wastes and Minerals	8-15
Table 2: Regulated Radioactive Drinking Water Contaminants	8-27

CHAPTER 9
INSURANCE INDUSTRY'S LIABILITY FOR
FINANCING SUPERFUND-MANDATED HAZARDOUS
WASTE CLEANUP COSTS

Introduction	9-1
9.1 Cleanup Costs	9-2
9.2 Superfund	9-3
9.3 Insurance Industry Involvement	9-7
9.4 Insurance Coverage Litigation	9-8
9.5 Insurance Coverage Issues	9-9
9.5.1 Pollution Exclusion	9-10
9.5.1.1 2001 CGL Pollution Exclusion— The First Paragraph [f. (1)]	9-12
9.5.1.2 2001 CGL Pollution Exclusion— The Second Paragraph [f. (2)]	9-14
9.5.2 Expected and Intended Damages	9-21
9.5.3 Trigger of Coverage	9-25
9.5.4 Covered Damages	9-30
9.5.5 Duty to Defend	9-30
9.5.6 Multiple Occurrences	9-31
9.5.7 Care, Custody and Control Exclusion	9-32
9.6 Conclusion	9-34

TABLES

Table 1-1	Chronology of Environmental Legislation	Table 1-1	1
Table 2-1	EPA Regional Offices	Table 2-1	1
Table 3A-1	Cross-Reference Between the All Appropriate Inquiries Standard (40 C.F.R. 312) ASTM E 1527-05 and ASTM E 2247-08		
Table 4A-1	Sampling and Analysis Technologies Matrix:		
	1a Sample Analysis Tools	Table 4A-1a	1
	1b Field Sampling and Collection Techniques	Table 4A-1b	1
Table 4A-2	Analytical Procedures, Samples Containers, Preservation, and Holding Times	Table 4A-2	1
Table 4A-3	EPA Primary Drinking Water Standards	Table 4A-3	1
Table 5A-1	Sample Description of the Nature and Extent of Groundwater Contamination: Estimated Dimensions of and Contaminant Concentrations in Groundwater Plumes at an Example Site	Table 5A-1	1
Table 5A-2	Estimating Differing Contaminated Soil Volumes Under Three Cleanup Levels for Total Petroleum Hydrocarbons from Gasoline, Diesel Oil and Motor Oils	Table 5A-2	1
Table 5A-3	Sample Acceptable Remedial Alternatives to Remediate Groundwater Contamination at an Example Site	Table 5A-3	1
Table 5A-4	Sample Press Release or Public Notice Announcement for an EE/CA for a Removal Action	Table 5A-4	1
Table 6	State Cleanup Program Websites	Table 6-1	1

APPENDICES

Appendix A	[Reserved]		
Appendix B	Checklist for Conducting All Appropriate Inquiries	Appendix B-1	
Appendix C	Brownfields Tax Incentive Case Study	Appendix C-i	
Appendix D	Methods of Investigation	Appendix D-i	

Environmental Liabilities Reading List

1980 - 1995

1996 - 1998

1999 - 2002

[available electronically at <http://resources.stpub.com>;
see Filing Instructions for user name and password]