

LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

ISO 15175 — Soil Quality Groundwater and Contaminated Land

ISO Certification Programme



LAPT — London Academy of Professional Training

Address 85 Great Portland Street, W1W 7LT, London, United Kingdom

Email info@lapt.org

Telephone +44 7513 283044

Web lapt.org

Reference ENV-SOL-15175 • ISO Environmental Sustainability

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AT A GLANCE

REFERENCE	ENV-SOL-15175
AWARD	Certificate
ASSESSMENT	430 marks — 258 to pass (60%)
PREREQUISITES	None
VALIDITY	Lifetime
AWARDING BODY	LAPT — London Academy of Professional Training

CURRICULUM

1

Contaminated Land Remediation Techniques

5 chapters · 30 classes65 marks

• 1 Introduction to Contaminated Land and Soil Quality — 6 classes

› 1.1 Define Contaminated Land and Its Impacts

› 1.2 Identify Sources of Soil Contamination

› 1.3 Describe Soil Quality Parameters and Standards

› 1.4 Explore Principles of Land Risk Assessment

› 1.5 Evaluate Contaminated Land Remediation Techniques

› 1.6 Apply Best Practices for Soil Quality Management

• 2 Assessment and Characterization of Contaminated Sites — 6 classes

› 2.1 Identify Key Indicators of Contamination in Soil and Water

› 2.2 Conduct Preliminary Site Assessments and Investigations

› 2.3 Analyze Soil Samples for Contaminant Types and Levels

› 2.4 Evaluate Groundwater Quality and Flow Patterns

› 2.5 Utilize Geophysical Methods for Site Characterization

› 2.6 Develop a Comprehensive Site Characterization Report

• 3 Remediation Technologies: Overview and Applications — 6 classes

› 3.1 Identify Key Remediation Technologies for Contaminated Land

› 3.2 Compare and Contrast Physical vs. Chemical Remediation Methods

› 3.3 Assess Biological Remediation Techniques and Their Applications

› 3.4 Evaluate the Effectiveness of In Situ vs. Ex Situ Remediation

› 3.5 Analyze Case Studies of Successful Remediation Projects

› 3.6 Develop a Remediation Strategy Based on Site-Specific Contaminants

• 4 In-Situ and Ex-Situ Remediation Techniques — 6 classes

› 4.1 Compare In-Situ and Ex-Situ Remediation Techniques

› 4.2 Evaluate the Effectiveness of In-Situ Methods

› 4.3 Identify Key Ex-Situ Treatment Technologies

› 4.4 Assess Environmental Impact of Remediation Techniques

› 4.5 Design a Remediation Strategy for Contaminated Sites

› 4.6 Implement Monitoring Procedures for Remediation Success

• 5 Regulatory Framework and Best Practices in Remediation — 6 classes

› 5.1 Analyze Regulatory Frameworks Impacting Remediation Approaches

› 5.2 Explore National and Local Legislation Affecting Contaminated Land

› 5.3 Identify Best Practices in Site Assessment and Characterization

› 5.4 Examine Innovative Remediation Technologies and Techniques

› 5.5 Evaluate Case Studies of Successful Remediation Projects

› 5.6 Develop a Remediation Plan Compliant with Regulatory Standards

• 1 Understanding ISO 15175 Standards and Their Importance in Soil Quality — 6 classes

- › 1.1 Explore the Fundamentals of ISO 15175 Standards
- › 1.2 Identify Key Components of Soil Quality Metrics
- › 1.3 Analyze the Importance of Groundwater Protection
- › 1.4 Discuss Contaminated Land Assessment Techniques
- › 1.5 Evaluate the Impacts of Non-Compliance with ISO 15175
- › 1.6 Develop a Strategy for Implementing ISO 15175 in Practice

• 2 Key Components and Terminology of ISO 15175 — 6 classes

- › 2.1 Identify Key Components of ISO 15175
- › 2.2 Define Essential Terminology Used in ISO 15175
- › 2.3 Explain the Importance of Soil Quality in ISO 15175
- › 2.4 Analyze the Relationship Between Groundwater and Contaminated Land
- › 2.5 Evaluate Implementations of ISO 15175 in Real-World Scenarios
- › 2.6 Develop a Plan for Applying ISO 15175 Standards in Practice

• 3 Application of ISO 15175 in Evaluating Soil Quality — 6 classes

- › 3.1 Understand ISO 15175: Key Definitions and Concepts
- › 3.2 Identify the Components of Soil Quality Assessment
- › 3.3 Analyze the Role of Groundwater in Soil Quality Evaluation
- › 3.4 Apply ISO 15175 Criteria to Real-World Soil Samples
- › 3.5 Evaluate Contamination Risk Using ISO 15175 Guidelines
- › 3.6 Develop Action Plans for Soil Quality Improvement Based on Assessment

• 4 Monitoring and Reporting Requirements under ISO 15175 — 6 classes

- › 4.1 Understand the Objectives of Monitoring under ISO 15175
- › 4.2 Identify Key Indicators for Soil Quality and Groundwater
- › 4.3 Establish Effective Data Collection Methods for Compliance
- › 4.4 Analyze Soil and Groundwater Data for Reporting
- › 4.5 Develop Comprehensive Reporting Frameworks for Stakeholders
- › 4.6 Implement Continuous Improvement Strategies Based on Monitoring Results

• 5 Integrating ISO 15175 into Environmental Sustainability Practices — 6 classes

- › 5.1 Understand ISO 15175: Key Principles and Objectives
- › 5.2 Identify Soil Quality Indicators in Environmental Context
- › 5.3 Assessing Groundwater Quality: Methods and Procedures
- › 5.4 Integrate ISO 15175 into Current Environmental Practices
- › 5.5 Develop a Stakeholder Engagement Plan for ISO Compliance
- › 5.6 Evaluate the Impact of ISO 15175 on Sustainability Goals

• 1 Understanding Soil Quality and Contaminated Land Principles — 6 classes

- › 1.1 Define Soil Quality and its Importance in Environmental Sustainability
- › 1.2 Identify Key Indicators of Soil Quality for Groundwater Protection
- › 1.3 Analyze Contaminated Land – Sources and Types of Contaminants
- › 1.4 Evaluate the Impact of Contaminated Land on Soil and Groundwater
- › 1.5 Implement Strategies for Soil Quality Improvement and Remediation
- › 1.6 Develop a Leadership Action Plan for Promoting Soil Quality Initiatives

• 2 ISO 15175 Standard Overview and Compliance Framework — 6 classes

- › 2.1 Explain the ISO 15175 Standard and Its Importance
- › 2.2 Identify Key Components of the Compliance Framework
- › 2.3 Analyze the Impacts of Soil Quality on Groundwater
- › 2.4 Evaluate Common Contaminants and Their Environmental Risks
- › 2.5 Develop Strategies for Compliance with ISO 15175
- › 2.6 Create an Action Plan for Implementing ISO 15175 Standards

• 3 Assessment Techniques for Soil Contamination and Quality — 6 classes

- › 3.1 Identify Key Indicators of Soil Quality
- › 3.2 Assess Methods for Soil Contamination Testing
- › 3.3 Analyze the Impact of Contaminants on Groundwater
- › 3.4 Evaluate Remediation Strategies for Contaminated Land
- › 3.5 Develop a Soil Quality Assessment Plan
- › 3.6 Present Findings on Soil Contamination and Quality

• 4 Leadership Strategies in Environmental Sustainability Practices — 6 classes

- › 4.1 Identify Key Leadership Qualities for Sustainability
- › 4.2 Analyze Successful Leadership Models in Environmental Practices
- › 4.3 Develop Strategies for Leading Sustainable Initiatives
- › 4.4 Engage Stakeholders in Environmental Decision-Making
- › 4.5 Implement Monitoring and Evaluation Techniques for Sustainability
- › 4.6 Advocate for Policy Changes in Environmental Leadership

• 5 Innovative Solutions and Future Trends in Soil Management — 6 classes

- › 5.1 Explore Innovative Soil Management Technologies and Their Impact
- › 5.2 Analyze the Role of Microbial Solutions in Soil Health
- › 5.3 Evaluate Case Studies of Successful Soil Remediation Projects
- › 5.4 Implement Practices for Sustainable Soil Carbon Sequestration
- › 5.5 Design a Community-based Soil Management Plan
- › 5.6 Forecast Future Trends in Soil Quality and Environmental Policy

• 1 Understanding Soil Quality: Definitions and Importance — 6 classes

- › 1.1 Define Soil Quality and Its Key Components
- › 1.2 Explore the Importance of Soil Quality in Ecosystems
- › 1.3 Identify the Factors Affecting Soil Quality
- › 1.4 Assess Soil Quality Indicators and Their Relevance
- › 1.5 Differentiate Between Soil Quality and Soil Health
- › 1.6 Apply Soil Quality Principles to Groundwater Management

• 2 Key Indicators of Soil Quality — 6 classes

- › 2.1 Identify Essential Soil Quality Indicators
- › 2.2 Analyze Soil Structure and Compaction Effects
- › 2.3 Evaluate Soil Nutrient Levels and Availability
- › 2.4 Examine Soil pH and Its Impact on Quality
- › 2.5 Assess Biological Activity as a Soil Quality Indicator
- › 2.6 Apply Soil Quality Indicators to Groundwater Management

• 3 Methods for Soil Quality Assessment — 6 classes

- › 3.1 Identify Key Indicators of Soil Quality
- › 3.2 Evaluate Soil Sampling Techniques for Quality Assessment
- › 3.3 Analyze Laboratory Methods for Soil Quality Testing
- › 3.4 Interpret Soil Quality Assessment Results Effectively
- › 3.5 Compare Field vs. Laboratory Soil Quality Assessment Approaches
- › 3.6 Implement a Soil Quality Management Plan Based on Assessment Findings

• 4 Management Practices for Soil Quality Improvement — 6 classes

- › 4.1 Identify Key Management Practices for Soil Quality Improvement
- › 4.2 Assess the Impact of Agricultural Practices on Soil Health
- › 4.3 Analyze Soil Amendments for Quality Enhancement
- › 4.4 Implement Sustainable Land Use Strategies for Soil Protection
- › 4.5 Evaluate the Role of Soil Conservation Techniques
- › 4.6 Formulate an Action Plan for Soil Quality Management

• 5 Regulatory Frameworks and ISO Standards in Soil Quality Management — 6 classes

- › 5.1 Identify Key Regulatory Frameworks in Soil Quality Management
- › 5.2 Explain the Importance of ISO Standards for Soil Quality
- › 5.3 Analyze ISO 15175 and Its Application in Contaminated Land
- › 5.4 Compare Different International Soil Quality Standards
- › 5.5 Assess the Impacts of Non-Compliance with Soil Quality Regulations
- › 5.6 Develop a Compliance Strategy for ISO 15175 Implementation

• 1 Fundamentals of Risk Assessment in Soil Quality — 6 classes

- › 1.1 Define Key Concepts in Soil Quality Risk Assessment
- › 1.2 Identify Common Contaminants Affecting Soil Quality
- › 1.3 Analyze Risk Factors Associated with Contaminated Soil
- › 1.4 Evaluate Techniques for Soil Quality Assessment
- › 1.5 Develop a Risk Management Plan for Contaminated Land
- › 1.6 Present Case Studies on Successful Soil Quality Remediation

• 2 Identifying and Evaluating Soil Contaminants — 6 classes

- › 2.1 Define Key Soil Contaminants and Their Sources
- › 2.2 Identify Common Methods for Soil Contamination Detection
- › 2.3 Assess the Impact of Soil Contaminants on Groundwater Quality
- › 2.4 Analyze Case Studies of Soil Contamination Events
- › 2.5 Evaluate Risk Assessment Models for Soil Contaminants
- › 2.6 Develop a Soil Contamination Management Plan

• 3 Quantitative Risk Analysis Techniques — 6 classes

- › 3.1 Define Quantitative Risk Analysis in Soil Quality Context
- › 3.2 Identify Key Components of Risk Assessment Models
- › 3.3 Evaluate Data Sources for Risk Analysis in Groundwater
- › 3.4 Apply Probabilistic Methods to Assess Contaminant Risks
- › 3.5 Analyze Case Studies of Quantitative Risk Management
- › 3.6 Develop an Action Plan Based on Risk Analysis Findings

• 4 Risk Management Strategies for Contaminated Land — 6 classes

- › 4.1 Identify Key Contaminants in Soil and Groundwater
- › 4.2 Assess Risks Associated with Contamination Levels
- › 4.3 Evaluate Remediation Options for Contaminated Sites
- › 4.4 Develop a Risk Management Framework for Contaminated Land
- › 4.5 Implement Monitoring Strategies for Contaminated Sites
- › 4.6 Communicate Risk Management Plans to Stakeholders

• 5 Regulatory Frameworks and Compliance in Risk Assessment — 6 classes

- › 5.1 Identify Key Regulatory Frameworks in Risk Assessment
- › 5.2 Analyze Compliance Requirements for Soil Quality and Groundwater
- › 5.3 Evaluate the Role of ISO Standards in Environmental Protection
- › 5.4 Assess Implications of Non-Compliance in Contaminated Land Management
- › 5.5 Develop Strategies for Ensuring Regulatory Compliance
- › 5.6 Create a Risk Assessment Plan Aligned with Regulatory Guidelines

• 1 Understanding Stakeholder Identification in Soil Quality

Management — 6 classes

- › 1.1 Define Stakeholders in Soil Quality Management
- › 1.2 Identify Key Stakeholder Groups Relevant to Soil Quality
- › 1.3 Analyze Stakeholder Interests and Concerns in Soil Management
- › 1.4 Assess the Influence of Stakeholders on Soil Quality Projects
- › 1.5 Develop Strategies for Effective Stakeholder Engagement
- › 1.6 Implement Communication Plans for Stakeholder Interaction

• 2 Effective Communication Strategies for Soil Quality Stakeholders

— 6 classes

- › 2.1 Identify Key Stakeholders in Soil Quality Management
- › 2.2 Analyze Communication Barriers Among Stakeholders
- › 2.3 Develop Tailored Messaging for Diverse Stakeholder Groups
- › 2.4 Utilize Digital Tools for Effective Stakeholder Engagement
- › 2.5 Implement Feedback Mechanisms to Enhance Communication
- › 2.6 Create an Action Plan for Ongoing Stakeholder Communication

• 3 Building Trust and Collaboration through Stakeholder

Engagement — 6 classes

- › 3.1 Identify Key Stakeholders in Soil Quality Management
- › 3.2 Assess Stakeholder Needs and Expectations
- › 3.3 Develop Effective Communication Strategies
- › 3.4 Build Trust Through Transparency and Honesty
- › 3.5 Facilitate Collaborative Problem-Solving Sessions
- › 3.6 Evaluate and Reflect on Stakeholder Engagement Outcomes

• 4 Facilitating Public Participation in Soil Quality Initiatives — 6

classes

- › 4.1 Identify Stakeholder Roles in Soil Quality Initiatives
- › 4.2 Develop Effective Communication Strategies for Public Engagement
- › 4.3 Utilize Visual Aids to Enhance Public Understanding of Soil Quality
- › 4.4 Facilitate Inclusive Workshops for Stakeholder Input
- › 4.5 Evaluate Feedback Mechanisms for Continuous Improvement
- › 4.6 Create Action Plans Based on Public Participation Outcomes

• 5 Evaluating and Measuring Stakeholder Engagement Outcomes —

6 classes

- › 5.1 Define Key Metrics for Stakeholder Engagement Outcomes
- › 5.2 Identify Stakeholder Expectations and Objectives
- › 5.3 Develop Tools for Measuring Engagement Effectiveness
- › 5.4 Analyze Data to Evaluate Stakeholder Engagement Outcomes
- › 5.5 Create Action Plans Based on Evaluation Results
- › 5.6 Communicate Findings and Adjust Strategies for Future Engagement