BTS
Training & Consultancy

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Contaminated Land Risk-Based Management

Duration: 5 Days

Introduction:

Increasingly, environmental decisions have being described as "risk based," especially in contaminated site cleanup and corrective actions, where risk-based decisions are thought of as more appropriate and cost-effective than decisions based levels criteria developed without recognition of risk assessment principles.

Many sites became contaminated during industrial uses. Such activities often results in chemicals and other toxic materials being spilled or deposited on land. Risk-based assessment is used to pinpoint the problems that could give rise to significant risk, and then identify cost-effective solutions for mitigating or remediating those risks.

The course provides a practical framework for organizations to manage potential and existing contaminated lands. It teaches you how to easily integrate environmental management into the business management structure to control the impacts which the activities, operations, products and services have on the environment and the public.

Training Methodology:

The training is conducted in a workshop fashion and is based with large capacity of practical sessions; and customized to the needs of the audience. Daily sessions include formal presentation, interspersed with directed discussion. In addition, there will be group workshops and discussions, analysis of real-life case studies, and focused training videos.

Who should attend?

This training is primarily intended for risk assessors and project managers involved with the characterization, remediation, and/or re-use of sites. It is also aimed at professionals in the Safety, Health & Environment field who have responsibility for the environmental risk assessment and management activity within their organization.

Course Objectives:

By the end of this course delegates will be able to:

- Identify and classify contaminated lands environmental hazards and risks.
- List the drivers and benefits for carrying out contaminated land risk-based assessment and management
- Evaluate variation in risk assessment parameters/approaches and their influence on risk management
- Understand the role of risk assessment in safety management.
- Discuss the hierarchy of risk management strategies.
- Determine when a qualitative vs. quantitative risk assessment is required
- Apply the principle of "Uncertainty & Risk-based Decision-making".

Course Outline:

Statutes, Regulations and Relevant To The Human Health Evaluation

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
National Oil and Hazardous Substances Pollution Contingency Plan (NCP)
Safe Drinking Water Act (SDWA),
The Toxic Substances Control Act (TSCA)

Resource Conservation and Recovery Act (RCRA)

- Remedial Investigation/ Feasibility Study (RI/FS)
- Data Collection
- Data Evaluation
- Exposure Assessment
- Risk Characterization
- Human exposure

Risk-based Decisions-making

- Risk-based Decision-making Model
- Dealing with information precision and resource needs
- Barriers to Risk-based Decision making
- Key factors in choosing risk assessment methods

Developing Contaminated Land Risk Assessment Conceptual Model and Strategies

- Source-Pathway-Receptor (SPR) model
- Scenario building
- Screening and prioritizing the risk
- Exploit staged approach to environment risk assessment
- Structured decision making

Risk and Reliability Criteria

- The problem with “acceptable risk”
- Principle of “as low as reasonably practicable” (ALARP)
- Risks to community, employees and others
- Economic factors in risk criteria
- Regulatory approaches to setting risk criteria