QUEST
Professional Center

PROFESSIONAL TRAINING COURSE

Course No. 1641

Environmental & Public Health Risk Management Training Course

PUBLIC HEALTH, ENVIRONMENT & SUSTAINABILITY MANAGEMENT
GOVERNMENT & PUBLIC SECTOR

DURATION
5 Days

DELIVERY
Classroom

Course Overview

Environmental & Public Health Risk Management Training Course is a professional and practical program designed to strengthen the ability of organizations to identify, assess, control, and monitor environmental and public health risks. The course provides a structured approach to managing risks that may affect employees, communities, assets, operations, and the environment, with particular relevance to organizations operating in complex industrial environments.

The course is especially relevant to the Oil & Gas sector, where exploration, drilling, production, processing, transportation, storage, refining, and associated industrial activities can create interconnected environmental and public health risks. Participants will examine practical approaches for managing exposure to hazardous substances, air emissions, wastewater, industrial waste, contaminated land, environmental incidents, and other operational risk sources.

Environmental and Public Health Risk Management requires more than identifying hazards. Effective management depends on understanding exposure pathways, evaluating potential consequences, prioritizing risks, selecting appropriate controls, monitoring performance, and maintaining effective emergency preparedness. The course therefore integrates risk assessment with occupational health, environmental management, emergency response, regulatory compliance, and operational decision-making.

Through practical exercises, industry-based scenarios, risk assessment activities, and incident simulations, participants will develop the ability to translate environmental and public health risk information into practical management actions. The program supports stronger risk-based decision-making, improved environmental performance, better emergency preparedness, and more effective protection of workers, communities, and operational assets.

Objectives

- Analyze the core principles of environmental and public health risk management and their application within Oil & Gas operations during the training program.
- Identify major environmental and public health hazards associated with exploration, drilling, production, processing, transportation, storage, and refining activities.
- Evaluate exposure pathways and potential health and environmental consequences using structured risk assessment methods.

- Apply practical techniques to assess chemical, physical, biological, and environmental hazards within operational facilities.
- Develop risk prioritization criteria based on likelihood, severity, exposure, vulnerability, and potential operational consequences.
- Assess air quality, water quality, wastewater, soil contamination, industrial waste, and emissions as components of environmental risk management.
- Design appropriate engineering, administrative, and operational controls to reduce environmental and public health risks.
- Develop monitoring approaches for tracking environmental conditions, occupational exposure, and relevant public health indicators.
- Evaluate the effectiveness of existing risk controls and identify opportunities for corrective and preventive action.
- Strengthen emergency preparedness and response capabilities for environmental releases, spills, contamination events, and hazardous material incidents.
- Develop practical performance indicators for measuring environmental and public health risk management effectiveness.
- Implement an integrated risk management action plan that connects environmental health, operational safety, emergency response, compliance, and sustainability objectives.

Who Should Attend

This course is designed for professionals responsible for environmental health, public health, occupational health, health, safety and environment, environmental compliance, industrial hygiene, sustainability, operational risk, emergency response, and environmental monitoring. It is particularly suitable for professionals working within Oil & Gas exploration and production companies, refineries, petrochemical facilities, pipelines, terminals, storage facilities, drilling operations, offshore installations, and supporting industrial services.

The program is also suitable for HSE Managers, Environmental Managers, Public Health Managers, Occupational Health Specialists, Environmental Engineers, Industrial Hygienists, Environmental Compliance Officers, Risk Managers, Sustainability Professionals, Emergency Response Coordinators, Operations Managers, Facility Managers, Process Safety Professionals, and technical specialists involved in environmental monitoring and risk control. It is equally relevant to executives, department heads, government officials, regulators, and decision makers responsible for environmental performance, public health protection, operational resilience, and risk governance.

Learning Outcomes

- Identify and categorize environmental and public health hazards across different Oil & Gas operations.
- Conduct structured environmental and public health risk assessments for operational activities and facilities.
- Analyze exposure pathways and determine potential impacts on workers, communities, and environmental receptors.
- Evaluate risks associated with hazardous chemicals, emissions, wastewater, industrial waste, spills, and contaminated areas.
- Prioritize environmental and health risks according to their potential consequences and required intervention.
- Select suitable engineering, administrative, and operational controls for identified risks.
- Evaluate environmental monitoring data and use findings to support risk-based decisions.
- Develop practical monitoring programs for air, water, soil, waste, emissions, and occupational exposure.
- Assess preparedness for environmental and public health emergencies and identify response gaps.
- Investigate environmental and health incidents and identify corrective and preventive actions.
- Develop meaningful environmental and public health performance indicators and reporting mechanisms.
- Prepare an integrated improvement plan for strengthening environmental and public health risk management within an Oil & Gas organization.

Course Outline

DAY 01

Fundamentals of Environmental & Public Health Risk Management

- Principles and scope of environmental and public health risk management
- Relationship between public health, occupational health, environmental health, and HSE management
- Identification of environmental and health hazards in Oil & Gas operations

DAY 01 — CONTINUED

- Chemical, physical, biological, and environmental risk sources
- Exposure pathways and potential impacts on workers, communities, and ecosystems
- Environmental and public health risks across upstream, midstream, and downstream operations
- Risk-based decision-making and operational risk management
- Roles and responsibilities of HSE, operations, environmental, health, and risk functions
- Integration of environmental and public health risks into corporate risk management

PRACTICAL APPLICATION

Develop an initial environmental and public health risk register for an Oil & Gas facility

DAY 02

Environmental & Public Health Risk Assessment

- Principles and stages of environmental and health risk assessment
- Hazard identification and exposure assessment techniques
- Evaluation of likelihood, severity, exposure, and vulnerability
- Risk matrices and risk prioritization methodologies
- Chemical exposure and hazardous substance risk assessment
- Physical and biological hazards in industrial environments
- Occupational and community exposure considerations
- Environmental receptors and potential pathways of impact
- Selection and evaluation of risk control measures
- Hierarchy of controls for environmental and health risk reduction
- Risk assessment documentation, review, and updating

PRACTICAL APPLICATION

Conduct a structured environmental and public health risk assessment for a selected Oil & Gas operation

DAY 03

Air, Water, Waste & Pollution Risk Management

- Environmental aspects and impacts associated with Oil & Gas operations
- Air emissions, pollutants, and potential health impacts
- Air quality monitoring principles and interpretation of monitoring data
- Water quality management and contamination risks
- Wastewater generation, treatment, monitoring, and control
- Soil and groundwater contamination risks
- Industrial, hazardous, and operational waste management
- Waste segregation, storage, handling, treatment, and disposal
- Spill prevention and pollution control strategies
- Environmental risks associated with hydrocarbons and hazardous materials
- Pollution prevention and resource efficiency approaches

> **PRACTICAL APPLICATION**
>
> Evaluate an Oil & Gas facility's air, water, wastewater, waste, and pollution risk profile and develop improvement measures

DAY 04

Environmental Emergencies, Incident Response & Health Protection

- Principles of environmental and public health emergency preparedness
- Emergency scenarios relevant to Oil & Gas operations
- Hydrocarbon spills, chemical releases, emissions, and contamination incidents
- Hazardous material emergency response principles
- Emergency containment, isolation, control, and recovery
- Coordination between operations, HSE, emergency response, medical, and environmental teams
- Public health considerations during environmental incidents
- Environmental and health monitoring during emergency situations
- Incident investigation and root cause analysis

DAY 04 — CONTINUED

- Corrective and preventive action management
- Emergency communication, reporting, and stakeholder coordination

PRACTICAL APPLICATION

Simulate an environmental incident at an Oil & Gas facility and develop a coordinated response and recovery strategy

DAY 05

Governance, Performance Measurement & Continuous Improvement

- Environmental and public health governance frameworks
- Policies, procedures, standards, responsibilities, and accountability
- Integration of environmental health with HSE and enterprise risk management
- Environmental and public health compliance management
- Risk control assurance and effectiveness evaluation
- Development of environmental and public health Key Performance Indicators
- Monitoring trends, identifying emerging risks, and supporting management decisions
- Environmental and health reporting for senior management
- Corrective action, preventive action, and continuous improvement
- Integration of environmental risk management with sustainability and operational resilience
- Building a risk-based environmental and public health improvement framework

FINAL WORKSHOP

Develop a comprehensive Environmental & Public Health Risk Management Action Plan for an Oil & Gas organization, including risk assessment, monitoring, controls, emergency response, performance indicators, governance, and continuous improvement mechanisms

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Register or Request More Information

Course page: https://quest-training.com/courses/environmental-public-health-risk-management-training-course
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