Environmental Risk Management in the Oil and Gas Training Course

21 - 25 Dec 2026

Barcelona

5900 € (Per Person)

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Course Introduction / Overview:

The oil and gas industry operates at the complex intersection of global energy demand and profound environmental responsibility. This intensive training course provides a comprehensive framework for identifying, assessing, and mitigating the environmental risks inherent in upstream, midstream, and downstream operations. Moving beyond basic compliance, the curriculum delves into the strategic implementation of robust Environmental Management Systems (EMS), proactive risk mitigation strategies, and effective incident response protocols. As discussed by leading academics like Dr. R. Kerry Rowe in the field of geoenvironmental engineering, the integrity of containment and remediation systems is paramount. This course explores such technical principles alongside the broader management context, referencing concepts from works like "Environmental Management in the Oil and Gas Industry". Participants will gain the critical skills needed to navigate the evolving regulatory landscape, manage stakeholder expectations, and champion sustainable practices within their organizations. BIG BEN Training Center has designed this program to empower professionals to transform environmental challenges into opportunities for operational excellence and enhanced corporate reputation.

Target Audience / This training course is suitable for:

- Environmental Managers and Specialists.
- Health, Safety, and Environment (HSE) Professionals.
- Operations Managers and Supervisors.
- Project Managers and Engineers.
- Compliance and Regulatory Affairs Officers.
- Corporate Social Responsibility (CSR) Managers.
- Risk Management Professionals.
- Geoscientists and Petroleum Engineers.
- Government Regulators and Environmental Agency Staff.

Target Sectors and Industries:

- Upstream Oil and Gas Exploration and Production.
- Midstream Transportation and Storage.
- Downstream Refining and Petrochemicals.
- Oilfield and Energy Services Companies.
- Environmental Consulting and Engineering Firms.
- Governmental bodies, including Environmental Protection Agencies and Ministries of Energy.
- Financial and Investment Institutions with energy portfolios.
- Marine and Shipping companies supporting offshore operations.

Target Organizations Departments:

- Health, Safety, and Environment (HSE) Department.
- Operations and Production Department.
- Engineering and Project Management.
- Legal and Compliance Department.
- Corporate Social Responsibility (CSR) and Sustainability.
- Risk Management Department.
- Exploration and Geoscience Teams.
- Supply Chain and Logistics.
- Corporate Affairs and Communications.

Course Offerings:

By the end of this course, the participants will have able to:

- Develop and implement a comprehensive environmental risk assessment for oil and gas projects.
- Design and audit an Environmental Management System (EMS) aligned with ISO 14001 standards.
- Master the principles of oil spill prevention, preparedness, and response planning.
- Navigate complex international and national environmental laws and regulatory frameworks.
- Evaluate and apply best practices for waste management, emissions control, and water treatment.
- Conduct effective environmental incident investigations and root cause analysis.
- Integrate Environmental, Social, and Governance (ESG) criteria into strategic decision-making.
- Communicate effectively with stakeholders on sensitive environmental issues.
- Manage the environmental risks associated with decommissioning and site remediation.

Course Methodology:

The training methodology at BIG BEN Training Center is centered on creating an immersive and practical learning experience. This course moves beyond theoretical lectures to engage participants through a dynamic blend of interactive techniques. Central to our approach are real-world case studies of significant environmental incidents and successful management initiatives from across the global oil and gas industry. These cases provide a platform for critical analysis and discussion. Participants will work in collaborative groups on practical workshops, such as developing a risk mitigation plan for a hypothetical drilling project or designing an outline for an emergency response drill. Expert-led presentations will break down complex topics like regulatory compliance and pollution control technologies into understandable and applicable concepts. The program fosters a peer-to-peer learning environment, encouraging attendees to share their unique experiences and challenges. Continuous feedback and interactive Q&A sessions ensure that the learning is tailored to the specific needs and questions of the participants, guaranteeing they leave with actionable skills and a deeper understanding of strategic environmental risk management.

Course Agenda (Course Units):

Unit One: Foundations of Environmental Risk in the Oil and Gas Sector

- Introduction to environmental risks across the value chain.
- The global energy landscape and its environmental implications.
- Key environmental aspects: air emissions, water usage, land disturbance, and waste generation.
- Understanding the life cycle of oil and gas projects from exploration to decommissioning.
- The business case for proactive environmental management.
- Core principles of corporate social responsibility (CSR) in the energy sector.
- International conventions and protocols governing environmental protection.

Unit Two: Regulatory Frameworks and Management Systems

- Overview of major international and regional environmental regulations.
- The role of Environmental Impact Assessments (EIA) in project planning.
- Developing and implementing an Environmental Management System (EMS).
- Deep dive into the ISO 14001 standard for environmental management.
- Techniques for effective environmental auditing and performance review.
- Managing legal liabilities and ensuring regulatory compliance.
- Stakeholder engagement and communication strategies.

Unit Three: Managing Operational Environmental Risks

- Best practices for air quality management and emissions control.
- Strategies for sustainable water management, including produced water treatment.
- Comprehensive guide to hazardous and non-hazardous waste management.
- Techniques for preventing and remediating soil and groundwater contamination.
- Protecting biodiversity and managing ecosystem impacts.
- Noise and vibration control in oil and gas operations.
- Chemical management and pollution prevention strategies.

Unit Four: Incident Prevention, Preparedness, and Response

- Developing a robust Oil Spill Prevention and Response Plan (OSPRP).
- Tiered response strategies for environmental incidents.
- Crisis management and effective communication during an emergency.
- Root cause analysis and environmental incident investigation techniques.
- Utilizing technology for environmental monitoring and early warning systems.
- Conducting effective emergency drills and preparedness exercises.
- Legal and financial implications of environmental incidents.

Unit Five: Sustainability, Reporting, and Future Challenges

- Integrating Environmental, Social, and Governance (ESG) criteria into business strategy.
- Frameworks for sustainability and environmental performance reporting.
- Managing the environmental challenges of decommissioning and site remediation.
- Climate change risk, carbon management, and the energy transition.
- Innovations in pollution control and green technologies.
- The role of the circular economy in the oil and gas industry.
- Developing a long-term vision for environmental stewardship.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How can the oil and gas industry strategically balance the immediate global demand for energy with the long-term imperative of environmental stewardship and the transition to a low-carbon economy?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by adopting a holistic and forward-looking perspective on environmental risk management. While many programs focus narrowly on regulatory compliance, this training course integrates compliance as a baseline and builds toward strategic, proactive environmental stewardship. It uniquely bridges the gap between technical operational challenges—such as produced water management and emissions control—and high-level corporate strategy, including the integration of ESG criteria and sustainability reporting. The curriculum is built upon a foundation of real-world case studies, providing participants with a practical understanding of both failures and successes in the industry. Rather than simply listing tools, we explore the decision-making processes and management philosophies that lead to effective environmental performance. Furthermore, the course directly addresses the future challenges and opportunities facing the sector, including the energy transition, climate change risk, and the principles of a circular economy. This strategic foresight equips participants not just to manage the risks of today, but to lead their organizations through the environmental complexities of tomorrow.