Training Course on Oil and Gas Storage Terminal Management

Professional Development Training Course Outline

Category	Oil and Gas	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The Oil & Gas Storage Terminal Management sector plays a crucial role in the global energy supply chain, ensuring the safe, efficient, and compliant storage of crude oil, refined petroleum products, and liquefied gases. As energy demand surges and supply chains become more complex, effective terminal management has become critical to mitigating risks, minimizing losses, and maintaining operational continuity. Training Course on Oil & Gas Storage Terminal Management delivers industry-proven strategies and insights into managing oil and gas terminals with an emphasis on safety, regulatory compliance, asset integrity, and digital transformation.

With increasing emphasis on environmental sustainability, digitalization, and risk mitigation, this course empowers professionals with cutting-edge knowledge and practical skills to navigate the modern challenges of terminal operations. Participants will explore trending tools such as SCADA, IoT, and predictive analytics, combined with a focus on safety culture, emergency response, and regulatory frameworks. This certification is essential for professionals seeking leadership roles in terminal operations, HSE, and logistics coordination.

Programme Curriculum

Training Course on Oil & Gas Storage Terminal Management

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Key Objectives

1. Understand terminal design and operational layout for maximum efficiency.
2. Enhance HSE compliance in terminal operations and meet global regulatory standards.
3. Learn the best practices in product inventory management and reconciliation.
4. Implement automation technologies in terminal management (SCADA, IoT).
5. Develop robust emergency response and crisis management plans.
6. Analyze tank farm operations and optimize for storage capacity.
7. Minimize operational losses using leak detection and maintenance strategies.
8. Address environmental and sustainability concerns in terminal operations.
9. Interpret terminal instrumentation and control systems for efficiency.
10. Integrate cybersecurity best practices in digital terminal environments.
11. Strengthen logistics, loading/unloading systems, and customer coordination.
12. Establish standard operating procedures (SOPs) and training protocols.
13. Apply real-world case studies to solve operational bottlenecks and incidents.

Target Audiences

1. Terminal Managers
2. HSE Officers
3. Maintenance Engineers
4. Storage & Tank Farm Operators
5. Compliance and Regulatory Officers
6. Logistics and Supply Chain Coordinators
7. SCADA/Automation Technicians
8. Environmental Safety Consultants

Course Duration: 10 days

Course Modules

Module 1: Introduction to Oil & Gas Storage Terminals

- Definition, purpose, and types of terminals
- Overview of terminal infrastructure and systems
- Key players and industry outlook
- Value chain and economic significance
- Terminal classification: Import/export, distribution, strategic
- **Case Study**: ExxonMobil's integrated storage terminal system

Module 2: Terminal Layout and Design

- Site selection criteria and environmental factors
- Tank types and design considerations
- Layout planning for safety and efficiency

- Equipment: Pumps, valves, piping networks
- Infrastructure integration with port/rail/road systems
- **Case Study**: Design optimization in Singapore's Jurong terminal

Module 3: Product Handling and Storage

- Product characteristics and compatibility
- Storage tank capacity planning
- Transfer systems: Loading/unloading methods
- Inventory control systems and metering
- Quality assurance during storage
- **Case Study**: Product segregation failure and recovery at BP

Module 4: Health, Safety & Environment (HSE)

- HSE policies and compliance frameworks
- Personal and process safety in terminals
- Firefighting systems and detection devices
- Hazardous area classification and zoning
- Permit-to-work and lockout/tagout systems
- **Case Study**: OSHA violations and incident response at Shell Terminal

Module 5: Automation and SCADA Systems

- Role of automation in terminal efficiency
- SCADA architecture and applications
- Data acquisition and remote monitoring
- Alarm management and trend analysis
- Real-time decision-making with analytics
- **Case Study**: SCADA implementation at Qatar Petroleum terminals

Module 6: Tank Farm Operations

- Types of tank farms and layout planning
- Tank gauging systems and calibration
- Safety measures and inspections
- Venting, blanketing, and overfill protection
- Heat tracing and insulation practices
- **Case Study**: Tank overfill incident at Chevron

Module 7: Maintenance & Asset Integrity

- Preventive and predictive maintenance
- Corrosion monitoring and control
- API standards and tank inspections
- CMMS integration with operations
- Shutdown planning and execution
- **Case Study**: Tank corrosion failures and retrofitting at Total

Module 8: Emergency Response Planning

- Risk assessment and hazard identification
- Emergency drills and scenario planning
- Coordination with fire departments and authorities
- Evacuation routes and muster point planning
- Post-incident investigation protocols

- **Case Study**: Terminal fire containment at Kinder Morgan

Module 9: Environmental & Sustainability Compliance

- Emissions control and vapor recovery units (VRUs)
- Spill prevention and containment systems
- Waste management in terminals
- Energy efficiency initiatives
- ESG reporting in terminal operations
- **Case Study**: Sustainability integration at Vopak terminals

Module 10: Terminal Instrumentation & Control

- Sensors, transducers, and flow meters
- PLCs and control panel configurations
- Instrument calibration and troubleshooting
- Integration with SCADA/ERP
- Real-time alerts and feedback loops
- **Case Study**: Instrumentation failure analysis in Saudi Aramco

Module 11: Logistics and Supply Chain Coordination

- Scheduling and dispatch planning
- Tanker truck and railcar operations
- Pipeline connectivity and flow balancing
- Interface management and product tracing
- Inventory turnover optimization
- **Case Study**: Supply chain disruption during hurricane season

Module 12: Terminal Cybersecurity & Digital Risk

- Cyber threats in operational technology (OT)
- OT-IT convergence risks
- Cybersecurity framework for terminals
- Threat detection and incident response
- Workforce cyber-awareness programs
- **Case Study**: Colonial Pipeline ransomware breach analysis

Module 13: Standard Operating Procedures (SOPs)

- SOP creation and revision techniques
- Documentation best practices
- Training and onboarding with SOPs
- Incident-based SOP modifications
- Auditing and compliance linkage
- **Case Study**: SOP lapse leading to safety incident in India

Module 14: Regulatory Compliance and Auditing

- Global standards: API, NFPA, ISO
- Local environmental and safety laws
- Preparing for internal and external audits
- Compliance documentation and reporting
- Regulatory risk mitigation
- **Case Study**: EPA audit of U.S. oil terminal with compliance gaps

Module 15: Terminal Performance & KPI Monitoring

- Identifying key performance indicators (KPIs)
- Real-time dashboards and analytics
- Benchmarking with industry standards
- Cost-reduction through data insights
- Continuous improvement frameworks
- **Case Study**: Efficiency gains at a digitalized Abu Dhabi terminal

Training Methodology

- Instructor-led sessions by certified industry experts
- Real-world case study analysis and simulation exercises
- Hands-on workshops with SCADA and control panel demos
- Interactive group activities and role-playing for emergency response
- Quizzes, assessments, and knowledge checks after each module

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

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