BLACKBIRD FOR TRAINING

Radiation Protection Officer and NORM Training Course

12 – 16 April 2027
Düsseldorf (Germany)



Radiation Protection Officer and NORM Training Course

Ref: 94_363468 **Date:** 12 – 16 April 2027 **Location:** Düsseldorf (Germany) **Fees:** 5900 GBP

Introduction:

This Radiation Protection Officer and NORM Training Course provides you with the skills to establish workplace radiological monitoring and control naturally occurring radioactive materials across industrial operations over one week. You will construct an Operational Radiation Protection and NORM Compliance Dossier incorporating zonation layouts, contamination screening protocols, and regulatory clearance calculations. You need a functional understanding of industrial safety routines, facility maintenance workflows, and basic scientific calculations to succeed in this practitioner-level course. You will practise through structured inspection walkthrough sessions, evaluating piping scales, testing mock radioactive waste containers, and auditing decontamination areas.

Course Objectives:

- Build a facility radiological inventory using IAEA GSR Part 3 categorization and safety criteria.
- Map controlled and supervised workplace boundaries using IAEA GSG-7 occupational radiation protection standards.
- Calculate multi-nuclide exemption thresholds using the NRRC-R-01-SR01 clearance summation formula.
- Execute radiological contamination surveys using Geiger-Müller pancake probes and sodium iodide scintillation detectors.
- Score personal dosimeter records and internal intake hazards using the NRRC National Dose Registry reporting guidelines.
- Draft a site radioactive waste manifest compliant with Engineering Procedure SAEP-358 tracking criteria.

Target Audience:

- You direct operational health, safety, and environmental protection programs across industrial processing facilities.
- You oversee maintenance turnarounds, pipeline pigging operations, and vessel descaling activities involving scale deposition.
- You manage hazardous waste handling, storage yards, and transport logistics for regulated oilfield by-products.
- You supervise field radiological surveys, instrument checks, and personal dosimetry records across production sites.
- You coordinate regulatory licensing, notification filings, and safety reporting submissions to statutory authorities.



Course Outline:

Day 1: Establishing Radiological Principles and Regulatory Foundations

- Classifying Ionizing Radiation Types Using IAEA GSR Part 3 Guidance
- Assessing Worker Radiation Exposure Under Statutory Decree Number M/82
- Evaluating Radiation Safety Requirements Governed by Technical Regulation NRRC-R-01
- Applying Notification and Authorization Workflows Defined in Regulation NRRC-R-02
- Build Baseline Radiological Inventory and Source Characterisation Register

Day 2: Applying Occupational Standards and Workplace Zonation

- Classifying Controlled and Supervised Areas Using IAEA GSG-7 Standards
- Evaluating Oilfield Scale Deposition Mechanisms from Safety Report 34
- Applying Exemption Criteria Per NRRC-R-01-SR01 Multi-Radionuclide Summation Formulas
- Calculating Dose Minimization Targets Using Time Distance Shielding Calculations
- Build Workplace Zonation and Regulatory Exemption Assessment Sheet

Day 3: Executing Contamination Monitoring and Radiometric Surveys

- Calibrating Geiger-Müller Pancake Probes for Surface Contamination Screening Protocols
- Operating Sodium Iodide Scintillation Detectors for External Gamma Surveys
- Screening Alpha Contamination Hazards on Turnaround Equipment and Vessels
- Logging MicroR Survey Readings Across Processing Tubulars and Sludge
- Build Contamination Monitoring and Radiometric Survey Log

Day 4: Controlling NORM Waste and Managing Occupational Doses

- Tracking Oilfield Scale Waste Per Procedure SAEP-358 Manifest Protocols
- Preventing Polonium-210 and Lead-210 Inhalation Using Engineering Containment
- Managing Passive TLD Badges and Electronic Dosimeter Exposure Logs
- Registering Site Worker Dose Files into the National Dose Registry
- Build NORM Waste Segregation and Personal Dosimetry Protocol

Day 5: Conducting Inspection Walkthroughs and Program Finalisation

- Executing Asset Contamination Audits Using Simulated Inspection Walkthrough Checklists
- Validating Storage Containment Barricades Against Controlled Zone Safety Criteria
- Reconciling Manifest Tracking Discrepancies Within Corporate Hazardous Waste Systems
- Auditing Exposure Threshold Records Against Statutory Dose Register Submission Standards
- Build Operational Radiation Protection and NORM Compliance Dossier



Skills You Will Gain:

- IAEA GSR Part 3 Inventory Classification
- NRRC-R-01-SR01 Exemption Summation Calculation
- IAEA GSG-7 Supervised Area Delimitation
- Geiger-Müller Surface Contamination Screening
- Sodium Iodide Scintillator Gamma Radiometry
- SAEP-358 Waste Manifest Reconciliation
- Occupational Internal Dose Hazard Containment
- National Dose Registry Worker File Administration

Why Attend This Course:

- Construct an Operational Radiation Protection and NORM Compliance Dossier to govern site radiation safety and waste management.
- Calculate radioactive material clearance limits accurately using the NRRC-R-01-SR01 summation formula on complex nuclide mixtures.
- Operate field survey instruments including Geiger-Müller pancake probes and sodium iodide scintillators to detect radioactive scales.
- Establish compliant workplace boundaries that safeguard maintenance workers from internal Lead-210 and Polonium-210 hazards.

Conclusion:

On your first week back, you will deploy the Operational Radiation Protection and NORM Compliance Dossier to audit active work permits and equipment laydown areas across your facility. You will review your boundary postings, survey data, and waste inventories with the facility operations manager and technical safety lead. After initial deployment, you will verify instrument response check logs, waste segregation storage boundaries, and occupational dose records to confirm that all NORM handling activities operate within statutory safety limits and corporate procedures.

Frequently Asked Questions FAQ:

What will you be able to do after the Radiation Protection Officer and NORM Training Course?

You will be able to perform radiometric contamination surveys, establish controlled and supervised area boundaries, calculate exemption thresholds, and supervise NORM handling operations. You can also audit waste containment and manage worker exposure tracking in line with international safety standards and technical regulations.



What do you need to know before starting the Radiation Protection Officer and NORM Training Course?

You need a basic working knowledge of industrial site health and safety practices, hazardous materials procedures, and basic arithmetic. Familiarity with plant equipment such as pipelines, separators, and storage vessels is helpful, though prior formal training in health physics or radiation protection is not required.

What do you build during the Radiation Protection Officer and NORM Training Course?

You build an Operational Radiation Protection and NORM Compliance Dossier. This deliverable includes a baseline source inventory, a workplace zonation plan, instrument survey logs, a multi-radionuclide exemption calculation sheet, and an occupational waste tracking protocol compliant with corporate and regulatory frameworks.

How does the Radiation Protection Officer and NORM Training Course differ from a course on a neighbouring subject or at another level?

This course focuses directly on practical radiological protection and naturally occurring radioactive material management within industrial operations. Rather than delivering abstract nuclear physics or medical radiology workflows, it concentrates on hands-on instrumentation, turnaround containment, oilfield scale handling, and industrial regulatory compliance.

