

COURSE OUTLINE

Title:	Naturally Occuring Radioactive Material (NORM) Training Course		
Duration	3 Days	Venue	Online & face to face
Schedule:	every month (2024_25)	Qualified Expert	Dr. Mohammed Aref

Course Description:

This NORM Course is cutomed to meet client requiremnets covering Radiation Protection from Industries as well as NORM Aspects .

This course provides delegates with all the necessary and up-to-date information about radiation protection and NORM designed according to the requirements of FANR & IAEA This training has been established providing a reference to Radiation Protection Officer and organization staff dealing directly or indirectly with Ionizing radioactive material & NORM

Course Objectives:

Upon successful completion of this course, each participant will be able to:-

- ❖ Apply proper rules and regulations on radiation safety and describe the characteristics of ionizing radiation and radioactive decay mechanisms
- ❖ Identify the different types of radiation units & measurement terminology, biological effects of radiation exposure and use proper methods of minimizing radiation dose
- ❖ Determine and use the radiation measurement techniques and develop in-depth understanding on the design and safety assessment of radiation protection in the industry
- ❖ Discuss the types of industrial radiation sources and safety equipment including personnel monitoring equipment, radiation detection equipment, x-ray machines, radiography cameras, associated equipment, transport containers, inspection, maintenance equipment, etc.
- ❖ Practice emergency planning procedures and appreciate personnel monitoring as well as contamination control and limits
- ❖ Understanding about NORM Aspects and how to handle NORM jobs at operations .
- ❖ Implement ALARA program on maintaining exposures and recognize the dose limitations
- ❖ Enumerate workers and management responsibilities on safety protection from hazards and apply the general rules of safe handling of radioactive sources
- ❖ Describe the operational and environmental monitoring protection from radiation and determine the responsibilities of the regulators and other agencies as well as the purchasing, receipt & disposal of radiation sources



- ❖ Practice safe transport of radioactive materials and apply the control and safety aspects of radiation protection program for transport
- ❖ Implement the safety procedures for radioactive waste management demonstrate radiography emergency planning, incident response and mitigation

Course Audience:

The course is designed for personnel who work in Industrial Radiography and require to be Radiation Protection Officers such as safety officers, engineers, inspectors and supervisors. Those already responsible for or planning to take charge of radiation protection and safe operation of radioactive materials, open and sealed sources, nuclear gauges, radiography cameras and other radiation devices in the workplace.

Assessment Methodology:

All courses conducted by LEARN WELL are begun with a written Pre-evaluation and end with Post-evaluation. Instructor will evaluate the knowledge and skills of the participants in accordance to the feedback given by participants. Post-Test evaluated result is comprised in the END OF COURSE REPORT submitted to the client's training department. This proactive method will help to recognize the benefits and knowledge gained by participants through the course.

Training Methodology:

Facilitated by a highly industrially experienced specialist; this program will be conducted as an extensively interactive methods, encouraging participants to share their own experiences and apply the program material to real-life work situations in order to stimulate group discussions and improve the efficiency of the subject coverage. Percentages of the total course hour classification are:

- ❖ 30% Theoretical lectures, Concepts and Role Play
- ❖ 30% Work Presentation and Techniques
- ❖ 20% Case Studies and Practical Exercises
- ❖ 20% Topic General Discussions with Relevant Videos

Course Manual:

Participants will be handed by a comprehensive reference manual. This colored manual is a compilation of core valuable information, references, presentation methods and inspiring reading materials in both hard and soft formats.

Course Certificate:

At the completion of the Course, all Participants who successfully accomplished the required contact hours will receive **Achievement Certificate** as a testimony to their commitment to professional development and further education.

Course Programme:

Day 1:

Registration
Welcome & Introduction
❖ Fundamental of Ionizing Radiation.
❖ Type, Characteristics & Sources of Ionizing Radiation.
❖ Natural and Man-Made Radiation Sources
❖ Application of Ionizing Radiation on Industry.
❖ Units & Fundamentals of Ionizing Radiation.
❖ Group Exercise.
❖ Biological Effects of Ionizing Radiation.
❖

Day 2:

❖ Principles of Radiation Protection (ALARA).
❖ Measurement Instrumentation (Dosimeter & Dose-meter).
❖ Anticipated Radiation Exposures & Assessment
❖ The development of radiation safety culture
❖ Group Exercise.
❖ Radiation Safety & Security Controls (Internal & External).
❖ IAEA Standards, CoP. International framework
❖ UAE- FANR Radiation Protection Regulations.

Day 3:

❖ Protection Against Occupational Exposure
❖ Contamination Control and Spills
❖ Classification of Working Areas.
❖ Transport of Radioactive Materials (FANR, DOT, UN, IAEA, IATA).
❖ Radiation Protection Management System Structure.
❖ RPO & Radiation Workers Responsibilities.
❖ Radiation Emergency Response Plan & Incident Management.
❖ Fundamental about NORM (Handling & Protection).
❖ Course Wrapping-up through Q&A.
Final Open Book Paper Exam
End of the Course



Instructor

Dr. Mohammad Aref (Ph.D.) QE / RPA



- 30 years International working experience at Oil & Gas, Energy & Government Sectors.
- UAE Qualified Expert in Radiation Protection, **ID FANR-QE-013**
- Certified RPO - AELB, IAEA
- 15 Years Hand-on experience at Radiation Protection filed.
- Certified RPO/ RPA for Oil & Gas / Industry & NOR
- Certified Instructor (NEBOSH, IOSH, OSHA).



By: Dr. Mohalhel

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