



International Safety Research Inc.

Radiological Incident Response Course (RADRES)

WHY A RADIOLOGICAL INCIDENT RESPONSE COURSE?

People and organizations involved in handling radioactive sources are faced with the possibility of experiencing radiological incidents that can lead to uncontrolled exposure to staff, facility members and the public. In addition to the health threat they represent, neglecting to respond promptly and effectively to accidents of this nature can create liability problems for radioactive source owners and operators. Providing radiological incident response training to personnel will help prevent these undesired effects. Not only does the RADRES course successfully fill this mandate; it offers participants the tools for preparing emergency plans and procedures, which are often inherent parts of the licence requirements imposed by regulatory authorities.

WHAT IS THE PURPOSE OF THIS COURSE?

The focus of the RADRES course is on early response. After reviewing radiation basics, participants attending this course will learn how to:

- prepare effective plans and procedures
- manage the response to an incident
- correctly assess potential consequences
- protect responders and members of the public
- deal with first aid in a contaminated environment
- manage contamination
- co-ordinate with other response and regulatory teams

WHAT IS THE BASIS FOR THIS COURSE?

This course is based on the latest international guidance from the International Atomic Energy Agency (including the *International Basic Safety Standards [SS-115]*), and on Regulator requirements for the response to radiological incidents.

WHO WOULD BENEFIT FROM THIS COURSE?

This course is ideal for response teams from industry, research centers and universities who potentially have to respond to radiological incidents. Other candidates include emergency planners, regulators and members of emergency services (i.e., fire fighters, police officers, ambulance attendants and the military).

WHAT IS INTERNATIONAL SAFETY RESEARCH INC.?

International Safety Research Inc. (ISR) is a Canadian firm with international experience in risk assessment and emergency response. ISR has provided countries such as Canada, Austria, the Netherlands, South Africa, Hungary, Romania, Algeria and Indonesia with these types of services.

ISR focuses on the technological aspects of risk, safety and emergency management when helping organizations identify, develop, implement and test the tools and knowledge that are needed to maintain effective small and large-scale safety management programs.

Our core services are:

- risk identification and analysis
- safety assessment
- development of technical basis for emergency planning and response
- development and implementation of emergency response organizations, plans, procedures and tools
- emergency response audits
- emergency response exercise preparation, conduct and evaluation
- training

RADIOLOGICAL EMERGENCY RESPONSE COURSE

Module 1: Introduction

- Background
- Regulations
- Regulator role
- International requirements

Module 2: Review of Radiation Basics

- Radiation
- Biological effects
- Exposure pathways
- Stochastic vs. deterministic risk



Module 3: Detection and protective equipment

- Ambient gamma measurement
- Surface contamination measurement
- Air contamination measurement
- Isotope identification
- Dosimeters
- Protective clothing
- Respiratory protection

Module 4: Response management

- Priorities
- Radiological vs. conventional response
- Response organization
- Loss of shielding
- Spill and contamination
- Fire
- Lost source



Module 5: Table top on incident response management



Module 6: Radiological assessment

- Survey techniques
- Dose assessment

Module 7: Contamination control

- Contamination monitoring
- Decontamination of personnel
- Decontamination of surfaces



Module 8: Medical first aid

- Priorities
- Precautions
- Transfer to the hospital
- Follow-up

Module 9: Drill

- Response to a spill

Module 10: Course evaluation and discussion