



# Contamination Control Programs & Reg. Guide 4.21

February 10-11, 2021 ♦ Live Online Instruction

Course Fee: \$895

If taking both Contamination Control and ALARA Programs, the course fee is \$1295

## DESCRIPTION

This 2-day course focuses on effective contamination control using the approaches given in NRC Regulatory Guide 4.21 entitled “Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning.”

## WHO SHOULD ATTEND

Practicing health physicists, radiological engineers, HP technicians, instructors, auditors, and managers responsible for contamination control programs will benefit from this operationally-oriented course, which is continuously updated to reflect current philosophy, lessons learned, and state-of-the-art equipment. The course has been developed to address the needs of NRC, DOE, Navy Nuclear, academic, and State-licensed HP programs.

## Topics

### Planning for Minimizing Contamination Application of a Risk-Informed Approach Minimizing Facility Contamination

- ♦ Leaks
- ♦ Spills
- ♦ Prompt detection of leakage
- ♦ Avoidance of release of contamination from undetected leaks
- ♦ Measures for reducing the need to decontaminate equipment & structures
- ♦ Periodic review of operational practices

### Minimizing Contamination of the Environment

- ♦ Development of a conceptual site model
- ♦ Provision for early detection of leakage & contaminant migration

### Final Site Configuration

### Facilitation of Decommissioning Minimizing Radwaste Generation

## This course will help you ....

- Understand basic principles of effective control of surface, airborne and personnel contamination.
- Gain a perspective on the NRC’s staff position on contamination control in licensed facilities, using Regulatory Guide 4.21.
- Become familiar with techniques for minimizing contamination in facilities and in the environment.

## INSTRUCTOR

**Dr. RODICAN P. REED** has over 30 years of experience in health physics, including 15 years as a Senior Health Physicist at the U.S. Nuclear Regulatory Commission (NRC) Technical Training Center. At NRC, he provided health physics training to NRC inspectors, Agreement State inspectors, and other Federal agencies. Dr. Reed also developed post-graduate training in radiation protection for the International Atomic Energy Agency (IAEA), which is now in use world-wide.

### Continuing Education Credits

The AAHP has awarded this course 16 CEU's.



## HOW TO REGISTER ...

Visit our website at [www.tmscourses.com](http://www.tmscourses.com) and register online, or call 860-738-2440. Registration questions can be emailed to [info@tmscourses.com](mailto:info@tmscourses.com).

# Effective ALARA Programs

February 8-9, 2021 ♦ Live Online Instruction

Course Fee: \$895

If taking both ALARA Programs and Contamination Control, the course fee is \$1295



## DESCRIPTION

This 2-day course was developed for Health Physicists and Engineers who have the responsibility for designing, implementing, appraising and improving dose reduction (ALARA) programs at operating nuclear facilities. The course will focus on methods for reducing employee dose and minimizing contamination spread through: improved operating procedures and work control methods, use of traditional dose-reduction techniques, consideration of state-of-the-art methodology (robotics, protective clothing, remote dosimetry, etc.), use of engineered controls (ventilation, decontamination, contamination containments), ALARA goal setting and evaluation, and appraisal of program design and implementation. Classroom exercises and a discussion of case histories in a variety of nuclear environments will help attendees gain a broad understanding of “lessons learned” from other nuclear facilities, with an emphasis on improving the current ALARA program.

## Topics

### Introduction

- Review of Fundamental ALARA Terms
- Introduction to the ALARA Concept
- Purpose & Scope
- Philosophy
- ALARA as a Component of Health Physics Programs
- Decision Analysis
- ALARA Checklists

### Administration of the ALARA Program

- Management
- Program Review & Appraisal
- Staffing
- Organization

### Optimization of Radiation Protection

- Concept
- Cost-Benefit Analysis
- Interferences to Optimization
- Suggested Approach
- Case Studies

### ALARA Goal Setting and Evaluation

- Setting Goals
- Achieving Goals
- Evaluating Goals

### Effective ALARA Design

- Design Review (New Facilities)
- Design Review (Modifications to Existing Facilities)

### Conduct of ALARA Operations

- Normal Operations
- Emergency Operations

## This course will help you ....

- Understand basic ALARA principles necessary for maximum dose reduction at your facility.
- Use cost benefit analysis in setting and achieving ALARA goals.
- Benefit from “lessons learned” from other ALARA programs in a broad spectrum of nuclear facilities.
- Minimize contamination spread through improved operating procedures and proper use of engineered controls.

## INSTRUCTOR

**Dr. RODICAN P. REED** has over 30 years of experience in health physics, including 15 years as a Senior Health Physicist at the U.S. Nuclear Regulatory Commission (NRC) Technical Training Center. At NRC, he provided health physics training to NRC inspectors, Agreement State inspectors, and other Federal agencies. Dr. Reed also developed post-graduate training in radiation protection for the International Atomic Energy Agency (IAEA), which is now in use world-wide.

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